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THE RELATION OF VENEREAL DISEASES TO VISION DEFECTS.*

B. FRANKLIN ROYER, M. D.,

New York.

Classification of the causes of blindness is altogether in a state of flux in this country. Incomplete case histories in the many eye clinics of our great cities, both at the ambulatory clinic and in the hospitals, make evaluation of records a trying study. Few of the causes of impaired vision and blindness are reportable afflictions; hence, complete records rarely come within the review of the health authorities.

Within recent years, the diagnoses established by ophthalmologists have been pretty carefully set forth at the time of admission of pupils to schools for training the blind; in some instances, workshops and institutions for the blind have had ophthalmologists determine the cause of the disaster. Missouri has a more complete compilation of dependable figures than any other state. For a number of years, the sore eyes in babies due to birth infections have been reported and in a few places we have a measure of the incidence of such infections. By tabulating the statistics in schools for the blind, we have been able to note the statistical trend over a period of years.

The medical profession has always known something of the great disaster wrought by syphilitic invasion of the eye tissues. Syphilis, however, was not a reportable disease until about the time we entered the great World War, and is not even now reported anywhere with any great degree of accuracy. A cross-section view of the prevalence of syphilis therefore is hard to secure.

The two types of venereal disease, both of which are all too common in this country and both of which are responsible for a great deal of impairment of vision and considerable blindness, do have distinct trails readily recognizable by the medical man or by the social worker.

Gonorrhea has long been recognized as a transmissible venereal infection causing great wreckage in the genito-urinary and birth canals and adjoining tissues. A hundred years ago, Gibson, in England, pointed out that expectant mothers afflicted with this disease were likely to give birth to children whose eyes would shortly be invaded or lost from gonorrheal invasion. It is rather interesting, too, to note that even a hundred years ago this wise English doctor pointed out not only the necessity for treatment of the birth canal long before the expectant birth but also the necessity for removing all possible soilage of the new born baby's eye tissues by cleansing and copious irrigation immediately after birth.

This wise preachment of Gibson fell largely on deaf ears until the advent of modern bacteriology and the application of Credé's observations in the Maternity

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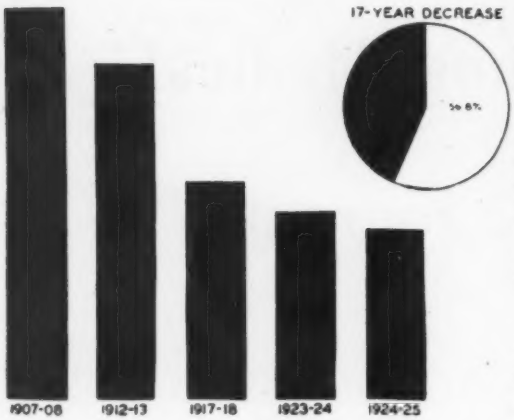

Hospital of Leipzig in 1881. The prophylactic treatment begun by Credé that, with but slight modification, has continued to the present and is responsible for averting many of the eye tragedies due to birth infections which would have occurred had this teaching not been generally adopted.

It is only fair to the teaching of Gibson to say that the modern methods were begun in 1881 and subsequently are but an elaboration and refinement of the methods advocated by him a hundred years ago, but are now based on a modern knowledge of germ life and growth.

Today we feel that the family doctor or accoucheur is grossly remiss, if the family is uninformed of the possibilities of germ invasion of the birth canal, of easy germ invasion of the eyes of the newborn and of their possible catastrophic results, and, further, we feel that those who are not alert in practicing preventive procedures that are almost certain to spare the newborn baby the tragedy of seriously impaired vision or blindness are unfaithful to the guild to which they belong.

A little comment on present teaching at this point may not be amiss. For too long a time the public and even physicians were too much impressed with the idea that the eye tragedies of the newborn were all due to gonorrhea and, in many instances, suggestive of parental immorality. About twenty-five years ago a young ophthalmologist, by the name of Stevenson, of Akron, Ohio, was wise enough to suggest full bacterial explanation of these eye infections at birth. Establishment of these facts enabled doctors to proceed with prophylactic procedures without thought of offending sentiment and enabled public authorities to teach what would be a wise precaution following every birth.

Dr. Stevenson was about the first American volunteer public health worker to point out that birth infections were due to at least half a dozen different kinds of bacteria. In the succeeding years by skillfully applying laboratory technique we have learned to recognize the various kinds of germs.

A doctor with his knowledge of birth procedure knows that it is almost impossible for a baby to be born without having its eye tissues soiled with feces and with colon bacilli. Anyone who knows the frequency of occurrence of boils, pimples and various local irritations caused by staphylococci will readily see that it is in no way disgraceful for these germs to be transmitted to the birth canal and for staphylococcal eye infections to result. Those who appreciate that the septic conditions following childbirth are usually due to streptococci and that they may have invaded the bruised tissues of the uterus or birth canal from a focus of infection in some distant area of the body, from the hands of the examining accoucheur or from instruments at delivery, will readily appreciate that streptococci may be found from time to time in the newborn baby's eyes. The pneumococci which bacteriologists find so constantly present in throats and lungs may be transferred readily by the expectant mother's hands to the vaginal tissues at any time before birth, may grow there, and thence gain access to the baby's eyes during birth. The micrococcus catarrhallis and other bacteria sometimes found in babies' sore eyes may have been transferred by the same route.

It is now generally accepted by students of the problem that approximately sixty percent of the birth infections are due to gonococci and that forty per cent are due to the other infections, any of which may be disastrous to vision.

It is from such studies that health officials find justification for urging that every newborn baby should have its eyes cleansed and protected from the possibility of any sort of birth infection, and complete justification for teaching every mother to insist upon having "drops" placed in the eyes of her baby. This is the small price of safety.

At the present time, thirty-two states supply to doctors and midwives, most of them free of cost, silver nitrate solution in the strength of one per cent in wax ampules convenient for use, and in packages suitable for carrying in bag outfits. This is the practice of your State Department of Health.

There is no excuse then, in the vast majority of our American families, for not cleaning up immediately any infection acquired as the baby passes through the birth canal.

The birth canal infected with gonococci may be rendered less hazardous for the expected baby by bringing the mother under competent medical supervision as soon as possible after conception, by utilization of the laboratory in studying its secretions and where dangerously infected, by beginning appropriate treatment long before birth occurs. Adequate treatment not only makes the baby less liable to acquire an eye infection, but also renders the mother less liable to serious bacterial invasion of her pelvic tissues.

The second place where this danger may be rendered less hazardous is by the application of drops of one per cent of nitrate of silver solution in the eyes of the baby as soon as possible after birth.

We have records from large maternity hospitals with statistics covering many thousands of births, including a large number of births where the mothers came from a walk of life with great exposure to the more virulent birth canal infections, and despite this factor these hospital records show that no eye infections developed and no eye disasters occurred.

It is not necessary to feature the need of immediate report of babies' sore eyes to the health authorities or for immediate treatment of the inflamed eyes developing within a fortnight after birth. This is the law in nearly all states now and is the kind of procedure all doctors would urge in any event.

Biblical references are made to the disease that affects the second and third generation. This undoubtedly refers to the hereditary evidences of syphilis. We have in every stage of syphilis hazards of the gravest moment to vision. It is safe to say that at least fifteen per cent of all blindness in America is due to this disease. For every case of total blindness traceable to syphilis, medical men and public health workers meet a still greater number, certainly several times as many, with seriously impaired vision due to syphilis.

It is well that the doctor should appreciate that when syphilis is transmitted to the unborn through the blood of the mother and subsequently attacks the visual apparatus, in infancy or childhood or later, it is very much more apt to affect the muscular and vascular coats, the interstitial tissues of the eye, than other parts, and it affects these coats early in life.

In heredo-syphilis of the eye the disease is apt to be sluggish and stubbornly recurring in character. The afflicted is likely to have his vision impaired a little more year by year through early childhood and school life, with partial invalidism due to impairment of vision reaching its height during the early productive years; and with partial blindness of fate, throughout the most useful period of life and until the end.

Interstitial keratitis, iritis, choroiditis, and retinitis, each may occur, and relapse

again and again, each recurring attack of these inflammations adding more impairment to vision. The pupil of the eye may be frozen; *i. e.*, completely caught in the inflammatory scar. The pupil may be closed down to a small opening or it may be caught with considerable opening, round or irregular in shape—it is fortunate if it be wide open. For this reason—an attempt to hold a good opening—you dilate the pupil as part of the treatment of iritis.

In syphilis of the eye, which is a by-product of venereal disease of the preceding generation, we may deal more hopefully now. With modern methods of attacking the virus of syphilis by appropriate medication injected into the blood vessels of the expectant mother before the birth of the child, we may avert these catastrophies and, incidentally, also avert all of the other manifestations of syphilis.

We have come within recent years to recognize the value and importance of almost routinely securing Wassermann tests of the blood of expectant mothers to determine the possibility of syphilitic infection, and with the indigent and careless woman, of invoking the aid of social workers to urge continuing treatment until cured. We are assured now by experience that if treatment of the expectant mother is begun by the fourth month of gestation and the treatment is given properly the child born of such a mother is almost certain to be born free of any evidence of syphilis.

Much may be done by the doctor, however, for the child born without having had syphilitic treatment through the blood of its mother for months prior to its birth. Hospital and ambulant clinics always have a long train of children and young adults registering and leaving, discontinuing treatment and resuming it again, month after month and year after year; most of them do not follow up treatment long enough to be cured, the vast majority of them being doomed to be economically and visually handicapped for life—community deficits, heavier deficits from year to year. Much may be done to avert these vision tragedies by holding these children to strict and long continued treatment in infancy or when recognized in childhood by finding the first eye stigmata. Here the doctor, the health officer and the public health nurse succeed best by co-operative team work.

Every effort in the interest of better social hygiene campaigns, every effort looking toward the establishment of more venereal disease clinics with follow-up workers, is bound to show its reflex in minimizing hereditary syphilis and its ravages in the tissues of the eye.

I should like to add a brief word about the acquired form of syphilis, particularly that acquired during adult life, and its relation to vision. Under modern conditions of living many an individual becomes afflicted with syphilis without in any way bearing the stigma of immorality. Whether or not the disease be acquired in innocence, is a secondary matter when we consider the disease from the standpoint of health, physical salvage of the individual and from the public standpoint.

Speaking particularly from the standpoint of conservation of vision of the afflicted, we cannot too strongly urge the routine Wassermann tests of the blood or spinal fluid of every individual who might in any way be suspected of having had or having acquired the disease, and of persistent and efficient treatment until cured. For a long and costly course of treatment the physician must often give service in part without remuneration or with altogether inadequate remuneration, particularly where no clinics are available.

Unfortunately, the eye symptoms of syphilis acquired in adult life often give no warning until long after the initial symptoms have been recognized. Unfortunately many an individual having taken treatment for a little while and seeing no signs of skin disfigurement or external evidence of disease that would prompt treatment, and not much out of health,

neglects to follow the medical man's advice. The eye tissues, like the tissues of the spinal cord and central nervous system, catch the brunt of the infection and suffer most from the toxic accumulations, sometimes only becoming easily recognizable twenty, thirty or more years after onset.

Too often an individual seeking medical advice comes with a shuffling gait and dragging toe, lost knee jerks, swaying station and failing vision. The physician or consulting ophthalmologist finds a hopelessly progressive atrophy of the optic nerve with blindness the inevitable result. If the patient had had adequate treatment fifteen or twenty years earlier no such eye catastrophe would have resulted and the locomotor ataxia or other grave complication might have been avoided.

We have no measure now of the trend of syphilitic eye disease since active intravenous medication has become a routine procedure. We shall have to wait a few years to determine if optic atrophy has been lessened as have other sequelae.

If, as physicians and health workers, we are able in the next ten or fifteen years to make the public realize that these two venereal diseases which so often cause profound impairment of vision or blindness are preventable, that they are curable if recognized in the early stages, and that it is more economical to practice prevention than cure, then we shall have performed our duty to mankind.

DISCUSSION.

Dr. Homer Dupuy (New Orleans): Mr. Chairman, I suppose you really might open the theme by making the observation that he who can distinguish syphilis under the protean forms, all things would be given unto him as to practice. Certainly, in every obscure picture in which the vision is seriously affected, the first thing we think about is lues. And at the present time, with the Wassermann tests and the other tests, it is hardly possible to escape the diagnosis.

But the most important thing, it seems to me, brought out by the paper is this fact: that though the child show no sign, not a stigmata of syphilis, whenever the background of the eye, the fundi, including the optic nerve itself, is involved, despite the negative microscopic and other evidences, I would still think it good practice to go on with the antiluetic treatment by all means.

Mr. Chairman, I am sure we are indebted to our distinguished visitor for bringing before us a very practical theme which can be discussed by all men because syphilis belongs to us all.

Dr. Dowling (New Orleans): Mr. Chairman, I don't know if all the men practicing in the country have had the same experience I had or not, but I had six years of country practice and in that time I never saw a case of gonorrheal ophthalmia. After I began the study of eye, ear and throat in the hospitals, I was rather amazed at the number of cases at the clinics for examination and for treatment. I am fearful however there are cases of this character that are not recognized by the physician. The fact that we have used nitrate of silver freely in the past years has gone a long way toward preventing this trouble. As Dr. Royer stated, it is furnished free by the State Board of Health. Nitrate of silver should always be used when the baby is born. If that is done we will get rid of ophthalmia.

It is a great pleasure to find Dr. Royer here this morning. I have known him for years. For twelve years he was associated with the Health Department of Pennsylvania. Later he was the health officer of Halifax, Nova Scotia. I had the privilege and pleasure of traveling through Massachusetts some years ago when visiting the tuberculosis hospitals and he was one of the party and was responsible for many good meals. I hope we will have an opportunity of showing him some bivalves of Louisiana before he gets away. I am glad indeed to have the opportunity of hearing him.

Dr. W. S. Taylor (Olla): I have been in active practice of medicine for fifty-six years. I suppose in that fifty-six years I have delivered as many women as most physicians. Dr. Dowling said that he never saw a gonorrheal ophthalmia for six years. I assure you I never have seen a case of gonorrheal ophthalmia in my practice for fifty-six years. During that time I was practicing medicine entirely in the country. There was no such thing as gonorrhea in my country. It was unknown. So I saw no cases of gonorrheal ophthalmia.

When we found it was necessary to use the silver one or two per cent solution in the eyes of all new-born children, of course I fell into line and I used it and I have used it since. Possibly that accounts for my remarkable escape from cases of gonorrheal ophthalmia.

Now, as Dr. Dowling says, he is furnishing this silver to the midwives and to the physicians. He is, but I want to say to him and I want to say to you that they are not using it. I know a half dozen physicians in my country that never carry nitrate of silver solution or any other antiseptic or antigonococcic with them. They go ahead and deliver these women and that is the end of it. Well, they are, fortunately, like myself, practicing medicine in the country and they don't get cases of gonorrheal ophthalmia often under such conditions.

Somebody has said that the midwife is responsible for this to a great extent. She is no more responsible for it in my country than the doctor. Absolutely no. Because he doesn't use it and she doesn't use it. Now something should be done along that line because these men are going to get caught some of these days with a case of gonorrheal ophthalmia which is going to destroy the eyes of the child. I am making this little talk for Dr. Dowling's benefit as well as for the benefit of the Louisiana State Medical Society.

Dr. Dowling: May I ask Dr. Taylor one question? As an executive officer of the Louisiana Parish Protective Association, I am sure he will see that they observe the law.

Dr. Taylor: I have done that which I could do. I have gone to them and talked to them and pointed out to them the necessity for the use of this one per cent silver solution and yet they go ahead and deliver these women, don't carry it with them, and that we don't get cases of gonorrheal ophthalmia there I must say is very fortunate. Somebody should get after them like you do and force them to do it. I am a home doctor and they frequently say, "Oh, that is Taylor. He can't force us to do anything."

Dr. Dowling: The reason I mentioned that: I read the constitution of the Protective Association and it obligates the members to comply with the health laws. That is the reason I called his attention to it.

Dr. Royer (closing): I have but one little thought to add. It was prompted by Dr. Taylor's remarks. I know there are many places in the United States where physicians are remiss in not offering this protection, but I wonder how such a doctor would defend himself in court if a case of ophthalmia neonatorum developed where he failed to use a prophylactic. I wonder if he could defend himself or say he was in line with modern medical practice.

It has been a very great pleasure to meet with you all. I very greatly appreciate, Mr. Chairman, this unusual privilege.

MENTAL HYGIENE IN RELATION TO GENERAL HEALTH.*

G. M. G. STAFFORD, M. D.,
ALEXANDRIA, LA.

"A sound mind in a sound body, is the best gift of the gods." Thus spoke Juvenal, the Latin poet, eighteen hundred years ago, and the changes wrought by centuries of time have in no manner altered the truth of this assertion. Inferior seed will yield a poor harvest, a diseased tree will bear defective fruit, and a sick body will hamper and weaken an otherwise brilliant mind. It has been said that "a sound body begets a sound mind," and even if there are exceptions, both conditions must be acquired and cultivated, if the highest round on the ladder of efficiency is to be the goal we are striving for. In order to attain this end, the laws of hygiene, as applied to both the body and mind, must be respected and obeyed. The mind may be developed to phenomenal heights, but if it has to reside in a sickly body, it will fail in the amount of work it would normally be expected to turn out, and sooner or later, it will cease to function in a practical and rational manner to the maximum of its capabilities. In other instances, minds which are, in the beginning, perfectly normal and evince great possibilities, are, when hampered by physical ill health, retarded in development, and not infrequently produce abnormal personalities. Thus it becomes a well known fact that hygiene of the body and hygiene of the mind are, like the states in the Union, "one, and inseparable"; or, as Longfellow so beautifully expressed it, when speaking of Hiawatha and his bride, "Useless each, the one without the other."

Mental hygiene has for its primary purpose the attainment in the individual of a healthy personality, well balanced, and sufficiently familiar with its own emotional mechanism, smoothly to adjust itself to any new or difficult environment in which it might be placed. In other words, it en-

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deavors so to train the various faculties and emotions, that when a strange and powerful experience is met, the individual will not be overwhelmed with discouragement, or go off on a tangent, but will face reality squarely.

This moulding of a healthy personality must be begun in early life, before the soft mental wax of youth has been dented by adventitious ideas of unguided adolescent origin. This problem has to be worked out in the home and in the schools, and therefore, the need is great that parents and teachers be instructed in the fundamental principles of mental hygiene. It is our duty as the guardians of mental and physical health to teach the laity what they should and must know. The future welfare of our civilization depends upon this, and as the population becomes more dense and the tax on the mind becomes greater, the necessity for this knowledge becomes more urgent. One has only to visit our institutions for the care of the insane and the mentally deficient, and note the pathetic extreme to which the human mind can digress in the wrong direction, and observe the great numbers of mentally sick human beings, to become aware of the urgent necessity for prompt action of some kind.

The National Society for Mental Hygiene was born of this necessity, and has for its object the advancement of such knowledge as will aid in the betterment of present mental conditions, and the prevention of this most distressing of all human ills. It teaches us how to acquire and enjoy mental health, and thus make life worth living. In some sections of our country, this worthy organization is accomplishing splendid results, and it is to be regretted that it is not functioning actively in Louisiana. The need for it is great, and if there were branches in every large town in the state, with the majority of their memberships composed of parents and teachers, the results for good would be of incalculable benefit to society. Through the efforts of various organizations, and especially of our Board of Health, the principles of hygiene, insofar as they relate to general health, are fairly familiar to all, but in reference to that portion of it which applies to the mind, there exists almost universal ignorance among the laity. An actively functioning mental hygiene organization in the thickly populated centers of our state is the greatest need of the hour, and if I can drive this one idea home, and make it bear fruit, I will feel that this paper has not been in vain. Education is the remedy, for without it the subject will never be appreciated, and its tenets will never be observed. Our insane hospitals would not be so overcrowded, many useful citizens would be saved for society, and many more mentally deficient would develop good instead of anti-social tendencies, if the principle of mental hygiene were better understood, and more frequently applied. This branch of Medicine is more important today than ever before in the history of the world. The modern stress of living conditions, brought about by progress and competition in attaining success, makes it so. In every branch of science, in every walk of trade and industry, twice as much mental exertion is necessary as was the case a century ago. The tax on the mental faculties has become so great that unless met with a well balanced personality, backed up by a healthy body, there is going to be a break sooner or later.

The foundation for mental, as well as physical health, is more substantially laid during early life than at maturity, and the ideal in both conditions is better, and more surely realized if mental and physical hygiene is practiced during the early period of development. But this does not mean that adults are not amenable to these principles. Dr. George K. Pratt, in writing a paper on this subject, well said, "The first thing for adults to understand is that mental health means more than mere freedom from insanity." If we will bear this in mind, we will readily see there is

much to be accomplished at this period of life. There are numerous phases of mental health, just as there are many stages of physical health. A man with toothache is not in the best state of physical health, nor is a man of moderate means who is irritated and harrassed by an extravagant wife in the most desirable state of mental health. A man who becomes a victim to worry, or one who is guided by his emotions rather than his intellect, or one who habitually lives in a world of day dreams, and shuts himself up in an air castle to the exclusion of his fellow man, is placing in jeopardy his mental health.

The rational and effective course to pursue to preserve normal mental health, or to rebuild it when it is weakened, is to learn to face reality squarely. You have to be a good soldier and look the difficulties which usually beset the path of life straight in the eyes. You must take them up as they appear, and dispose of them with equinimity and reason. If this course is pursued, there is little danger of their overwhelming us. The weakling who runs from them is soon overcome with the worry and remorse born of cowardice, and starts down the thorny road of mental ill health. Tom Moore, the great Irish poet, probably did not know there was such a thing as mental hygiene, but when he wrote, "Whatever sky's above me, here's a heart for every fate," he simply emphasized in his inimitable verse one of the shining tenets of that science as it exists today. If this were taken as a text, and preached to our youth, as well as the adults of our land, it would act as a sure guidepost on the highway of life, and when the cross road of worry, despondency, and suicide was reached, the traveler would seldom hesitate as to which was his course.

Another salient maxim of mental hygiene is to learn to think with your intellect, and not with your emotions. Every human act, in order to be normal in all its phases, must emanate from our intelligence. The various emotions are strongly grafted upon our being, and unfortunately, frequently control our lives. Judgments formed, decisions made, and prejudices cherished on emotional ground, rather than reason, soon lead to mental ill health. One pursuing this course, is simply deceiving himself as to facts, and once this condition becomes a fixture in his life, he is mentally sick, and unfit to face the problems which daily arise. This, and similar conditions, make an individual anti-social. The prodromal symptoms of this common personality usually manifest themselves in young life, when prophylaxis is best exerted. Whereas many phases of poor mental health can be alleviated, and even cured, in adult life, I am sure no one will deny that the surest good results are to be obtained in childhood, and by the influence and training exerted by parents and teachers. First see that the child is physically fit, and then impress his young mind with sane, common sense thoughts, correcting him with kindness well seasoned with firmness. There are two extreme conditions not infrequently found in the home, which work incalculable harm to mental health. One is found in the harsh, tyranical parent, and the other in the over solicitous, over indulgent, unwisely loving parent. Both are likely to bring about dire results to the impressionable and youthful personalities of their children, and the over affectionate parent will probably create the greatest havoc. In both instances the parents are guided by their emotions, instead of their intellect. Bad seed are planted, and a poor harvest will be the result.

CONCLUSION.

I would stress the following points:

1. Mental and physical hygiene are so closely interwoven, that it is impossible to violate the laws of one without affecting the other.

2. The best time to lay a good foundation for mental health is during childhood.

3. Whereas mental hygiene applies to adults as well as to children, in the latter, the results are more substantial.

4. A more actively functioning mental hygiene society in Louisiana is to be desired. Its need is great, its teachings are essential, and the betterment of society demands it.

DISCUSSION.

Dr. Chas. Holbrook (New Orleans): There are so many interesting phases of Dr. Stafford's paper that one hardly knows where to begin. If we could walk through his institution, our institution that he governs, the State Colony and Training School at Alexandria, and see the 260 or 270 feeble-minded children there, we would be doubly impressed and we would all be willing to put our shoulders to the wheel and see if something could not be done to lessen this great load that we have to carry.

The feeble-minded problem and its allied problems today are probably the greatest question before us. It used to be the thing among medical men to know nothing of nervous diseases or anything relative to the mind or the brain. The medical man used to pride himself on this lack of knowledge. Fortunately that attitude is changing. It is changing in a large measure because of the public desire for information along these lines.

You can hardly pick up a magazine today without finding something relative to mental health. The public is often better educated on some of these problems than our medical profession so it behooves us to know something about these things.

The feeble-minded situation in Louisiana is especially bad. We haven't the adequate facilities to take care of the children. I am going to ask Dr. Stafford, if he will do so, to tell us just what the situation is in Louisiana, and what the plans are in the future, and what we as doctors can do to help out the situation.

Dr. W. J. Otis: Dr. Stafford's paper, when it is published in the Journal, should be read not only by every medical man but by every citizen of the Commonwealth of Louisiana. Mental hygiene in itself means making a success out of failures, and unless the individual knows how to go about making successes out of failures, the individual who attempts to teach our citizens is at a loss to know how to commence. The proper way to teach this individual how to make a success out of failures is through the physician in the medical school.

When we were given a course in neurology in the old days, we were given five or six lectures and we crammed for two questions in the department of medicine. I think some of the schools are still doing that today. They probably get three questions or four, not any more than half a dozen. The man is supposed to know all neuropsychiatry and that which neuropsychiatry teaches in probably not more than twenty lessons and some exhibitions of abnormal conduct and the four questions in this examination.

That is where the system is wrong. If we as physicians want to teach the public, what are the most of us going to teach them? It is quite true as Dr. Holbrook said that the layman is much better educated than some of the physicians. Let your institutions give so many lectures on Mental Hygiene. It is just as necessary to know the essentials of mental hygiene as it is to know about this bacillus and that bacillus or that heart sound and that fluctuation and that sinus and this sinus.

Unless we have the proper training in the medical schools we are at a loss to handle the problem on the outside. Mental hygiene should be taught in the home as well as the school. The results of abnormal conduct and abnormal reactions are largely due to parental control. As the twig so the tree. Unless we can bring that broadly to the people as physicians and know what we are talking about, we are going to have a crop of charletans springing up in our midst and then all the medical colleges in the country are not going to down them. We have it every day. We have the bone rubbers because of the neglect of systematic and intelligent massage.

There is no reason why medical schools can't take it up. They will have to face the issue sooner or later and the sooner the better.

Dr. T. J. Perkins (Jackson): In discussing Dr. Stafford's paper, I do not know that I can add very much to what he has said, but I would like to emphasize the points brought out in his paper.

I do not know of any subject that is of greater interest in public health than the question of mental hygiene. It brings out not only a medical question in connection with public health, but a sociological question as well. The sociological feature has brought about a doubt as to the legal responsibility of the character born and reared in an atmosphere of crime and rebellion against law and order. The man needs mental hygiene for the development of his aesthetic and emotional nature. It also brings about a question of differentiation between the man who is a criminal through environmental conditions, and the man who has the inherent lack that we find in the psychopathic personality.

With the increase of mental conditions, we must recognize the fact that with a properly functioning society of mental hygiene many of these individuals could have been steered around the con-

flicts upon which they finally foundered. The normal development of personality, the balancing up of personality traits, would certainly prevent a great many patients going to our mental hospitals.

It is a question upon which the public must be educated, and there is no organization that is capable of carrying on this system of education like the medical profession and the public health department in connection with our public schools. There should be a mental hygiene clinic established, as Dr. Stafford has brought out, in all of the principal towns and cities of this state. We are going to have to face this question, and as long as we neglect it, just so long will people in increasing numbers be brought to our state hospitals.

I thank you very much.

Dr. Oscar Dowling: May I say for the State Board of Health that the board is thoroughly in sympathy with the idea of mental hygiene clinics and it will co-operate to the extent of its ability.

Mr. Chairman, while I am on the floor—we have with us Dr. J. C. Geiger, a native of Louisiana, a graduate of Tulane, recently appointed executive officer of the Department of Health of the City of Chicago, and I, therefore, move that the privilege of the floor be granted Dr. Geiger.

Dr. J. C. Geiger: I am a little surprised that Dr. Dowling should take this opportunity of introducing me. I only dropped into this meeting by accident. I came down the river with Mayor Thompson's party. As a graduate of Tulane and a one-time member of the Louisiana State Medical Society, it gives me a great deal of pleasure to come before you. This trip of the Mayor of the City of Chicago is somewhat surprising to a number of people, but was done for many reasons; one in particular, to bring to the attention of this part of the Valley his efforts to make a waterway from the Great Lakes to the Gulf. Incidentally, he had with him a number of congressmen and senators and a large number of business men of Chicago on this trip.

We left Chicago, going by way of St. Louis, and took two steamers, going down the Mississippi to Cairo and up the Ohio and back again to Cairo, leaving there about Tuesday morning. The mayor's party rescued people here and there. Mayor Thompson left a large sum of money and medical supplies all along the route.

My connection with the trip is that I was detailed as executive officer of the Department of Health.

I was much interested in the discussion brought up on the question of mental hygiene. Being in charge of a large department of health, the question of mental hygiene to me is a very important point. I am particularly interested in mental hygiene as it comes under our department, but I am curiously more interested in having some continuity of plan, a practical plan that we can work out in the schools of the City of Chicago. I have no doubt that a plan could be suggested that would be of some service to a department of health, but the department of health cannot go into a school system, speaking as an administrative officer, without some definite practical continuity of action, at least an idea or a plan that would be a success.

So far as I am concerned, I thank you very much for allowing me this privilege of being here this morning. I am always glad to be back home. I happen to have been born in Alexandria and my connection with the Department of Health in Chicago is due partly to Tulane University. I happen to be connected at the University of Chicago as Professional Lecturer in Epidemiology. It is exceedingly pleasant to me to be before you and meet old friends.

Dr. Stafford (in closing): Dr. Holbrook asked that I say something about the feeble-minded situation. I am always glad to talk on that subject. It is one that is very close to me.

I suppose that most of you gentlemen are probably in the same fix that I was a few years ago before I paid any attention to this subject; I didn't really appreciate the situation.

Gentlemen, there is no question but that the subject of feeble-mindedness is one of the greatest social problems that faces us today. A survey of large areas throughout the country has demonstrated beyond contradiction that two per cent of our general population is mentally defective. That means, bringing it home, that there are close to 35,000 mentally defectives in the State of Louisiana.

When you first hear that it is appalling to you. But fortunately, we don't have to take care of all that 35,000. A large proportion of them are sufficiently high-grade to care for themselves and get out and make their own living and adjust themselves to normal social conditions. But it has been demonstrated that eight per cent of that two per cent are hospital cases, cases that should be in an institution. That will mean that there are about 2800 feeble-minded people in Louisiana that should be in an institution.

At present, we have an institution which is in its infancy, just beginning, and we have an occupancy of 262. That is as many as we can take. We have a new building under construction which will take care of 130 more, so probably about

the first of the year we will have a population of abut 400.

What we need is appropriations for buildings to care for these people. I have 500 applications in my office on file now waiting for admission.

One of the most interesting features of the feeble-minded question to the general medical profession is in regard to etiology. The second thing on the list is birth injuries as a cause. Intracranial hemorrhage stands at the top of it. Of course, you all know that heredity plays the largest part. Heredity probably accounts for fifty per cent of our feeble-minded, and birth injuries stand second on the list. It is well to bear that in mind and in all of our obstetrical cases have that in front of us. The only time to do anything is in the beginning, and not wait until the brain has been destroyed or interfered with by intracranial pressure.

MILK, ITS RELATION TO INFECTIOUS DISEASE.*

PAUL R. NEAL, M. D.,

MONROE, LA.

Good milk has done more than any other single food to promote health, but bad milk has probably caused more sickness and death than all other food combined. Milk is a good culture media and is associated with the transmission of more different infections than any other single food. It is the only animal product which is almost entirely used in its raw state. It is difficult to obtain, handle, and deliver in a safe, sanitary condition. In infancy and sickness, when we are most susceptible to infectious disease, milk is often the sole article of our diet.

Milk contains more bacteria than any other article of food, and the number of bacteria is the best single index as to its sanitary character. Bacteria which are pathogenic for man usually enter the milk from human sources; two notable exceptions are bovine tuberculosis and malta fever.

*Read before the Louisiana State Medical Society, New Orleans, April 26-28, 1927.

The diseases which have been spread by milk are: tuberculosis, typhoid and paratyphoid fever, diphtheria, scarlet fever, septic sore throat, dysentery, malta fever, infantile paralysis, epidemic arthritic erythema, foot-and-mouth disease, and we may also add "milk sickness," which has not been shown to be a bacterial disease.

Up to 1907, Trask of the U. S. Public Health Service, collected data on 260 milk-borne epidemics, to which may be added 240 collected by Hart, Busey and Kober, and 90 which were collected for Denmark by Caroe, making a total of 590 epidemics of milk-borne disease in the period from 1878 to 1907.

Typhoid ranks first among milk-borne diseases. We have data on 282 epidemics of this disease, transmitted by milk, representing a total of 14,973 cases with 845 deaths.

Of the 125 milk-borne epidemics of scarlet fever collected by Trask, Hart, Busey and Kober, data are given for 100, in which there were 8073 cases with 178 deaths. By the same authors also, data are given for 48 of the 51 milk-borne epidemics of diphtheria cited by them. These include 2875 cases with 242 deaths. From the same source we have data on 6 out of 7 reported milk-borne epidemics of septic sore throat, comprising a total of 921 cases with no deaths. Since 1908, severe epidemics of septic sore throat have occurred, traceable in each instance to milk, and adding more than 12,000 cases to the number recorded above. These figures will give you some idea of the enormous economic loss in sickness and death due to milk-borne disease.

Leslie Frank of the U. S. Public Health Service has collected data on 112 epidemics from 1918 to 1923, an average of 18.7 epidemics due to milk each year. For the year 1924 he collected data on 44 such epidemics for that one year alone. This apparent increase in the prevalence of milk-borne disease is probably due to the fact that health officers are studying epidemics

more efficiently and are more frequently able to determine the cause.

THE CHARACTER OF MILK-BORNE EPIDEMICS.

1. *Explosive nature.* It is characteristic of milk-borne epidemics that the appearance of cases is sudden and in fairly well defined crops. Consumers of infected milk usually receive the infection from a common source at or about the same time, and making allowances for variations in incubation periods, they usually become sick at about the same time. The severity of the cases is usually augmented due to the fact that bacteria multiply freely in milk, thereby resulting in a massive dose of infection.

2. *The disease follows the milk route.* The location of the cases when plotted will be found to correspond more or less closely with the milk route of some dairy or milk plant. When the infected milk supply is one which reaches all parts of the city, the location of the cases is not significant, but they will be found to have nothing in common except the milk supply.

3. *The better homes are invaded.* The incidence of cases may be expected to be higher in the well-to-do homes than in the homes of the poorer classes, since the former enjoy a more liberal use of raw milk for beverage purposes, while the latter use it principally for coffee and tea.

4. *There is a special incidence among milk drinkers.* In many instances the only person in a home who is attacked is the one who drinks raw milk, and in others the only one spared is the one who does not drink milk.

5. *Age and Sex.* Women and children drink more milk than men and it is generally believed that a high incidence among women and children is characteristic of milk-borne epidemics.

Milk which is apparently good, and even certified milk, has been known to be the cause of epidemics. For example, an epidemic of paratyphoid was reported by Williams at Albany, N. Y., caused by certified milk. Another outbreak occurred at New Rochelle, N. Y., in 1924, in which certified milk was responsible for 60 cases of enteritis among infants and adults. Paratyphoid B. was isolated from their stools and also from the stools of a milker employed at the dairy farm.

There was an outbreak of diphtheria at Westchester County, N. Y., in 1920, due to certified milk.

SOURCE OF CONTAMINATION OF MILK.

Milkers and milk handlers may be convalescent cases of typhoid or of other infectious diseases or may be ambulant carriers of these diseases. The milk handler who has diphtheria, scarlet fever, septic sore throat or poliomyelitis may cough or sneeze into the milk. Milkers have been known to spit on their hands before milking. Some of them wet their hands in milk during the process of milking and others frequently do not wash their hands after using the toilet. Some milk handlers are so economical that they spit the milk back into the can after tasting it.

Air, dust and flies may contaminate the milk either in the barn where it stands in the pail or in the milk depot where cans are often allowed to stand with the covers off.

Milk utensils, coolers, bottles and other containers may not be properly sterilized, and in many instances are found to have been washed with polluted water, in some instances polluted water has been added directly to the milk. It sometimes happens that milk bottles are refilled without washing as was found in the typhoid epidemic at Montclair, N. J., in 1902, where all the cases were on one dairy route, but only those who were taking pint bottles were attacked. It was discovered that the first case, moving in from another town, took three pints of milk a day. These bottles were collected, refilled without washing, and distributed, resulting in 29 cases of

typhoid in the homes buying pint bottles. No cases occurred in families who bought only quart bottles.

Typhoid fever heads the list of milk-borne epidemic diseases. In Washington, D. C., a study was made of all the typhoid cases from 1907 to 1910, and 10 percent were found to be due to milk. Epidemics due to milk may be extensive, for illustration the Boston epidemic in 1908 in which there were 410 cases, 348 of whom were supplied with milk from a farm where the owner had typhoid fever. At Palo Alto, California, in 1903, there were 232 cases of typhoid among the users of milk from one dairy where the milk cans were washed and the milk diluted with water which came from a creek polluted with sewage. In 1893 at Oakland, California, there were 362 cases of typhoid among the people who patronized one dairy. The milk from this dairy was infected by the excreta of a typhoid fever case living on the bank of a creek which supplied the dairy with water.

Milk is usually infected with typhoid by an ambulant carrier or a convalescent case. Sears, Gerhart and Mack report an interesting epidemic which occurred in Portland, Oregon, in 1924. The source was a urinary carrier, age 72, who gave no history of having had typhoid and who had never heard of an epidemic of this disease. He was found to have a seminal vesiculitis which gave a pure culture of typhoid bacilli.

Tuberculosis. About one-eighth of the deaths from tuberculosis are due to the bovine type of the disease which is almost commonly transmitted by milk. The infection may gain access to the milk through diseased udders. This source, however, appears to play a minor role, since only 1 to 2 per cent of the tuberculous cows have udder lesions. Tubercle bacilli are not secreted through healthy udders. The common method of infection is undoubtedly by manure. The mucus from diseased lungs is laden with tubercle bacilli. The cow cannot spit up the muco-pus, but swallows it, causing the feces to be highly infected. In 1910 a study of 551 samples of milk in 4 American cities showed the presence of tubercle bacilli in 46 or 8.3 per cent. This was assumed to be representative of the milk supply of American cities at that time.

Scarlet Fever. In this disease the milk is usually infected through the intervention of someone who is actually suffering from this disease. Ramsey reports an epidemic of 128 cases in Michigan in 1924 due to ice cream which was made by a man suffering from scarlet fever. Outbreaks of this disease due to milk may be very extensive. In the first 20 days of January, 1907, there occurred 717 cases in four towns in Massachusetts, and in each of these towns over 80 percent of the cases took their milk from one large dairy which was the main source of supply for these four towns.

Diphtheria. Epidemics of this disease apparently due to milk were reported in England as early as 1877. The infection is usually due to a clinical case or a virulent carrier on the dairy farm. Two instances are reported in which the disease apparenty came from the cow; one reported by Deen and Todd in which there were two cases of diphtheria in a family whose cow had mammitis. Klebs-Loeffler bacilli were isolated from the milk of this cow and from the throats of the two cases. In 1917 McCoy, Bolton and Bernstein reported an extensive outbreak of diphtheria due to ice cream at New Port, R. I. This epidemic was explosive in character, attacking the older age groups more than children and was mild with no fatalities.

Septic Sore Throat. Widespread and severe epidemics of this disease have been spread by milk. One in Boston, in 1911, caused 2000 cases with 48 deaths. In this outbreak there was a relative immunity among children and a high mortality among the aged and infirm. The milk from the dairy responsible for this outbreak had for years been above suspicion and extraordinary precautions were taken to insure its safety and purity. This dairy had enjoyed

a clean record for 28 years preceding this epidemic. There was an epidemic of 10,000 cases in Chicago, studied by Capps and Miller, who found sore throat in the dairy workers and a mastitis effecting 4.6 percent of the cows. Through abrasions and fissures, etc., the teats of a cow may become infected with streptococci of human origin, and the cows may remain a carrier of this organism for several weeks.

Diarrheal Diseases. These diseases are frequently milk-borne, as the *B. dysenteriae* grows well in milk and is a common cause of infantile dysentery, which has a high mortality in the first year of life. The milk is usually infected in the home or in the wards of a hospital were some member of the family or a nurse who is suffering from diarrhoea prepares the milk for the infant. Flies have been found to carry *B. dysenteriae* for several days, and infected flies are common around wards where there are patients who have dysentery.

Malta fever is primarily a disease of goats, but is transmitted to man through infected milk. The organism, *Brucella melitensis,* appears in the milk of the infected animal and in all the other body secretion. Ten per cent of the goats supplying milk in the Island of Malta were found to be infected, and an endemic area has been found along the Rio Grande river in the United States.

Foot-and-mouth disease is an infection primarily of cattle and secondarily in man. It is transmitted by a filterable virus which was the first virus of this kind to be discovered. The infection is transmitted through milk and milk products, and the disease in man shows the same symptoms which are seen in animals. The course of the disease in man is mild and is seldom fatal except in very weak children.

Epidemic arthritic erythema is a disease resembling dengue which has been transmitted by milk. An epidemic of this disease in which 80 people were attacked, occurred at Haverhill, Mass., in January, 1926. Pain and swelling of the joints were a common symptom and all but one case in this epidemic took milk from one dairyman. A similar outbreak of this disease occurred in Pennsylvania in 1925, in which there were 400 cases.

Infantile Paralysis. Two epidemics of this disease have been transmitted by milk which is an unusual rather than a common means of transmittal. One of these epidemics which occurred at Cortland, N. Y., in December, 1925, was studied by Knopp, Godfrey and Aycock. It consisted of 8 cases all of whom took milk from a certain dairy. A milker at this dairy was sick but continued milking until paralysis of his left arm forced him to discontinue. He then sought medical treatment and his case was diagnosed as poliomyelitis. These 8 cases occurred in a town of 1500 on the route of a dairy which supplied but 4 percent of the city's milk supply. The milk was handled by a person who was actually sick with the disease at that time and the chain of evidence as to the transmission of the infection is about as complete as is found in the majority of milk-borne epidemics.

"Milk Sickness," while not known to be an infectious disease, is a poisoning carried by milk which should be mentioned here. This disease was first recorded in this country in North Carolina in 1776. It is an acute non-febrile disease which is due to the ingestion of milk from a cow suffering from a disease known as "trembles." This disease in animals is caused by eating white snake root or rayless goldenrod. The toxic principle of these poisonous plants is excreted in milk. It is quite fatal to both man and animals. The poisoning is characterized by great prostration, persistent vomiting, constipation and high mortality.

CONCLUSION.

Milk-borne epidemics of infectious diseases are common and are much more often recognized at the present time than they have been in the past. They are always

due to raw milk or its products. There is no record of an epidemic of milk-borne disease which was due to milk properly pasteurized.

DISCUSSION.

Dr. K. E. Miller (New Orleans): The paper of Dr. Neal very clearly emphasizes the fact that milk is an important vehicle in the transmission of disease. Although the number of epidemics that has been cited in this paper may seem comparatively small in relation to the number of epidemic diseases as a whole, we must bear in mind that the number of epidemics that have been studied and recorded perhaps represent but a small portion of the actual total damage caused by milk-borne diseases.

Frank's studies indicate very clearly that the more we look for milk-borne epidemics, the more of them we find. We have good reason to believe that there are a great many individual cases of milk-borne disease and epidemics that escape recognition as being of milk-borne origin. Take typhoid fever for illustration. We know that undoubtedly typhoid carriers play an important role in the transmission of this disease, but it is only within recent years, the past four or five, that we have had any adequate conception at all of the extent of our typhoid fever carrier problem. This has been brought about by the use of the brilliant green biomedium for the isolation of typhoid germs from the feces and stools of patients.

The work of our State Board of Health field laboratory is very illuminating in this respect. Mr. Heffernan, the field laboratory agent of the State Board of Health, has a record of 403 examinations of dairy workers, that is, the feces and stools of these individuals, with a finding of sixteen positives, or 3.97 per cent, practically four per cent of the individuals examined have proven to be, by the brilliant green biomethod, positive carriers of typhoid fever germs.

In Alabama, a similar series of examinations has been made with the same method with somewhat higher evidence of typhoid carriers, I think about five per cent.

With such a large incidence of typhoid fever carriers among dairy workers, it is reasonable to suppose that those dairies which are not rigidly controlled with respect to typhoid carriers constitute a very great hazard to public health.

You, perhaps all of you men here, are called upon from time to time to give medical certificates to food handlers. In view of the indicated instances of typhoid carriers among the general public, the issuance of medical certificates should become much more than a simple perfunctory matter, because we are turning loose people to handle food of others in the raw state in many instances, especially among dairy workers, and certainly we must expect a great hazard to public health from active carriers of typhoid fever germs.

Dr. Neal's paper also very properly pointed out some of the specific modes in which infection of the milk supply takes place. There is ignorance of considerable extent among the laity on this subject, and even, sometimes, we find gross ignorance among health officers. I have in mind now a very good illustration of this. A certain health officer in Tennessee, a county health officer, was telling me on one occasion about a case of typhoid fever that he had to deal with in the family of a well-to-do farmer. He emphasized the fact this farmer was not only well-to-do, but he and all of his children were well educated. They had typhoid fever in the family and he said that he had great difficulty in convincing those people that they had gotten their typhoid fever from milk drawn from cows that had been drinking out of a pond covered with green scum. Now I don't wonder that he had difficulty in convincing any intelligent person of the origin of that typhoid.

As long as ignorance of this kind prevails with respect to the methods of transmission of typhoid fever and all milk-borne diseases, we can't expect to make much progress in their control. From a practical standpoint we know that milk is a problem, a serious problem, in the spreading of communicable diseases, typhoid and other diseases, and what are we going to do about it? Are we going to say, "Stop drinking milk." Why, certainly not. We can't cure one evil with another. But it behooves every physician to concern himself about the safety of the milk supply that is going to his patients and to his community.

There are some five fundamental principles in the safety of a milk supply. One is healthy milk handlers (and in that I include the absence of carriers); second, healthy cows; third, sanitary equipment including barns, milk utensils and the like; fourth, sanitary methods; and fifth, adequate refrigeration.

Of these five principles, I think I would say that the first and the last are the most important. However, we are not expecting the doctors to become dairy inspectors. The State Board of Health and the local Board of Health provide men for that purpose. Moreover, when we expect doctors to become the foremost exponents of better milk in their communities, we do not expect them to do so by dictating the technical methods by which better milk supplies are to be

secured. The agencies that I speak about, the State Board of Health and the local boards of health, have men who are specially trained for this purpose. What we do want is for the doctor to champion the principle of better milk and then call in those whose business it is to prescribe and institute the protective measures.

Dr. John Schreiber (Franklinton): There is no doubt but that Dr. Neal has proven his point that diseases are carried by the milk route and he does not need anything from me in regard to that. The case has been well covered and Dr. Miller has told us how to keep them from doing that thing. He has given us the method by which we can prevent this. All that I will do with my five minutes will be to recall an instance or two that shows that many cases are not getting into the record at all. Dr. Miller made that remark. There must be a great many instances that do not get into the literature at all, individual cases and the smaller groups of cases.

I recall an instance of scarlet fever being reported in a community where I was doing public health work and naturally it occurred to me there must be some more scarlet fever cases, so I struck out to see if I could find the source of that one case. I found two other cases that had not been reported but which were scarlet fever. They had a physician, but one of them had been reported as sore throat (taking quinine by the way), and the other put it down as sore throat with rash. As soon as this reported case came out, another physician called up the office and stated he had a case of scarlet fever that he probably wouldn't have reported if he had not heard about the other case, and that was another instance of an unreported case of scarlet fever, a very mild case.

In tracing these up, I finally concluded they came from a milk source. The first three cases were milk-borne; the fourth case, however, was not a typical case of scarlet fever. After going over these cases, the special health officers concluded they were scarlet fever and the two severe cases were the result of this early case. We could not prove that the first case was scarlet fever, so that is just another instance of finding unrecorded cases and a case that we were quite sure was scarlet fever brought on by the milk route but could not get into the literature for lack of proof, one of the unproven cases.

There occurs to me something that might happen occasionally in the distribution of typhoid fever. We are inclined to think of the carrier only as being in the dairy. I think I know of an instance where the man's milk route became infected from the outside. Now there are a great many people still milking in a rather careless kind of manner in the smaller dairies. Dairies are getting better but the methods are not improving very rapidly. In this community the dairies were in pretty fair shape but the methods were lax. The men had not learned good methods of keeping clean and there was no steam used. I think every sanitary code requires that milk bottles should never go out of the house where there is communicable disease unless they are sterilized by some responsible person, somebody responsible for the health of that community. There is a considerable amount of neglect about that feature. This man had seven or eight cases of typhoid on his route. I am quite sure that he got a case from the outside. He carried these milk bottles back and washed them in the tub like all the rest, merely with warm water and not at a temperature that would in any way affect the typhoid germs and prevent the carrying of infection. We could not find any record of any one having had typhoid fever and two examinations were made of everybody in that plant. There were no carriers. But there were cases of typhoid fever in this community. Some were on his route. I am quite sure there was an instance where the milk bottles were carried back, placed in the tub with the other bottles and the infection spread in that way.

The average physician takes it for granted the bottles are sterilized. They may be in some places but in lots of places the bottles are not sterilized. This whole community of something like 14,000 people was being supplied with milk from containers in the cleansing of which there was not one ounce of live steam used.

These dairymen who just wash their bottles should certainly scald them. You can readily see that infection can get in from the outside.

I only mention these two instances. I think they may be of some practical use to you. It might help to caution the people not to let those bottles out of the house where there is a communicable disease until some responsible person has sterilized those bottles. The statutes of law provide for that but it is very often neglected.

I thank you.

Dr. Neal (closing): I wish to thank Dr. Miller and Dr. Schreiber for their discussions. I really haven't anything further to say except in the instance of a large city like New York approximately 200,000 people come in contact with the milk supply in the production and handling of the supply of that city each year, so you can see the large possibilities for infection due to carriers and cases of the various communicable diseases. The same situation would apply to a city this size only in less proportion.

THE MILK PROBLEM FROM THE MUNICIPAL HEALTH OFFICER'S VIEWPOINT.*

J. G. MARTIN, M. D.,
LAKE CHARLES, LA.

In this paper I will endeavor to give briefly my experience with the milk problem in the City of Lake Charles during the time I have been health officer.

In 1922, when I took over the duties of health officer, we had no milk ordinance in effect. Milk was being produced and distributed with practically no supervision. The fact that on my return from the army I found my children had been drinking milk from a dairy 75 per cent of whose herd was tuberculous was largely responsible for my accepting the office. I therefore went into office with the determination to clean up the dairies and to furnish the public with milk as near safe as we could manage to get it.

In the early part of the year 1922 we adopted a milk ordinance drawn up for us by Dr. Lucas, scientific assistant with the United States Public Health Service. Operating under this ordinance we succeeded in improving the quality of the milk; but we were much surprised and gratified when in the spring of 1924, after a statewide dairy survey made by the American Child Health Association in collaboration with the Louisiana State Board of Health, Lake Charles was rated as having the best milk supply of any city in the state. This distinction, by the way, we have been able to maintain during two succeeding surveys.

While the ordinance was a good one, we felt that it had some weak points. For instance, grading of the dairies was determined entirely by the bacteria count. This we felt was a defect, since a dairyman could, by simply keeping his milk at a very low temperature, make a grade of A, no matter how much dirt the milk might contain. When, a little more than a year ago, the U. S. P. H. S. Standard Ordinance as amended by the State Board of Health was recommended to us, we immediately saw that with its system of grading on points of equipment, sanitation and methods at the dairy as well as on the laboratory examination of the milk, it was an improvement over our old ordinance. Accordingly we took the necessary steps to adopt it; but before doing so we submitted it to the dairymen, who, at a meeting called for the purpose of considering the ordinance, endorsed the ordinance and asked for its adoption. It has now been in force for a year, and my conclusions as to its workings are as follows:

As regards the health of the community, I would simply call your attention to the fact that last year our death rate for white residents was 7.1 per thousand—very much lower than in any previous year. The death rate among children between one month and fifteen years has steadily declined. In 1924, between these age limits we had 37 deaths, 12 white and 25 colored; in 1925 there were 34 deaths, 10 white and 24 colored; in 1926 there were 25 deaths, 6 white and 19 colored. This steady decrease in the number of deaths among children accompanied a steady increase in population. Last year, with a population of about 17,000, we had not a single death among white residents from 2 to 15 years of age. Our local undertaker is authority for the statement that while in former years it was his custom in the early spring to put in a stock of children's coffins, in the last few years there has been no demand for them. We ourselves consider the improved milk supply to be the greatest single factor contributing to the better health conditions in our city.

So much for the milk ordinance as it affects the public—and the public should come first.

Now, how does this ordinance effect the dairymen? From our experience, and from the testimony of various dairymen, we have

*Read before the Louisiana State Medical Society, New Orleans, April 26-28, 1927.

come to the conclusion that it has benefitted the dairy industry. The ordinance has been strictly enforced. One or two of the dairymen gave us some trouble, but since being made to realize that we were in earnest about the enforcement of the ordinance they have ceased to combat it and are now co-operating. The great majority of the dairymen are hearty in their endorsement of the ordinance, realizing that the requirements demanded of them, instead of proving a hardship have been a help in the operation of their business, and a source of general satisfaction. The per capita consumption of milk in the city has increased over 50 per cent. None of the dairymen have become bankrupt and none have gone out of business—on the contrary several new dairies have been established and appear to be flourishing. It is our belief that the dairy industry is on a more substantial basis now than it has been in years, and many of the dairymen say they would not go back to the old conditions for any consideration.

We have thus come to the conclusion that the Standard Ordinance is of real benefit to the community. It has promoted a greater consumption of milk, thus improving the nutrition of the children and benefitting the dairymen in a financial way. It has one objection, which is that it throws a considerable burden on the health officer and his staff. The results, however, we feel are well worth the trouble.

DISCUSSION.

Dr. W. H. Robin (New Orleans): The role of the municipal health officer varies with the city and the population he has in charge. In some communities, especially in some of the more enlightened population, a more modern construction of matters is comparatively simple. In a cosmopolitan city like New Orleans, with its many age-old traditions and habits and consisting of such a varied population composed of so many nationalities, the problem is more complex. These statements can be emphasized in the case of milk control.

The old milk man, with his two-wheel cart and ten-gallon cans, one of which was sometimes used for water, used to be a familiar sight on the old cobble stone streets of New Orleans. That type has long since passed and we can say that, from a standpoint of adulteration of milk, the problem has been reduced comparatively to nothing here in New Orleans.

The bacterial side of the milk question is nearer and harder to impress on the minds of the dairymen and the people. Our semi-tropical climate and the long haul necessary for a great proportion of our milk supply adds to the difficulty of producing a milk of lower bacterial count.

Like all progressive communities, New Orleans is in favor of furnishing to its citizens the best quality of foods of all sorts and we feel especially determined in regard to the milk supply. The City of New Orleans has always been glad to accept the advice and follow the leadership of the Public Health Service and, when the standard ordinance as proposed by that Service was offered for the adoption by municipalities, the City of New Orleans, through its Board of Health and Commission Council, was quick to take advantage of the opportunity and passed, after a considerable effort and propaganda, such an ordinance. Unfortunately, due to a misapprehension of the facts, under the belief that the State Board of Health had passed the standard milk ordinance and that it was a part of the sanitary code, the ordinance adopted by the City of New Orleans was declared illegal, due to minor technical differences with the supposed ordinance in the sanitary code of the State Board of Health.

More recently another effort was made to pass a new ordinance but, unfortunately, in the interim, a large force in opposition had been recruited and, due to honest differences about the practicability of the ordinance, it was defeated.

My Board and myself are for the adoption, as soon as feasible, of some form of ordinance which will help give the same control from a bacteriological standpoint as we now have from a chemical standpoint, with milk. I feel sure in saying that whenever we can show the Commission Council of New Orleans that the passage and enforcement of such an ordinance will not be inimicable to the best interests of the city and that it can be practically put into effect, that we will receive their support in the enactment of such a law.

In the meantime, I can pledge the undivided efforts of my Board and myself in the enforcement of all sanitary measures in connection with the dairy industry and, in this way, we hope by a campaign of inspection, education and encouragement to bring the dairy people and the public up to such a state of enlightenment in regard to this question that they will be among our strongest supporters in any proposed ordinance.

Dr. Dowling: May I speak for myself? Officially I want to thank Dr. Robin for the co-operation and support he gave to the milk ordinance passed on to the commission council of the City of New Orleans, adoption of which unfortunately, for good reasons of their own, was postponed, but will certainly come back some time to the Board of Health for consideration.

I want to read to you now from the United States Department of Agriculture Farmers' Bulletin No. 602 on the "Production of Clean Milk," the definition of clean milk. "Clean milk is milk of good flavor from healthy cows that is free from dirt and contains only a small number of bacteria none of which are harmful." Note the statement, "a small number of bacteria."

With reference to the temperature, they refer to the fact that when milk is drawn from the cow it varies from 80° to 100°F. The temperature most favorable to the growth of bacteria is retarded by continuous low temperature. The growth at 70°F. is rapid, at 50° it is much retarded and at 40° or below it is very slow.

I wanted to give you that information as coming from the Department of Agriculture in Washington which, of course, comes from the dairy division.

In the recent trip over the state we have found in some of the most remote places some of the neatest little dairies. They are cheaply constructed but their equipment and construction is such as to render them able to produce the best milk possible. I would gladly refer to dairies that we saw outside of the larger cities, at Melville, Ville Platte, Winnsboro, Kelly and other points. I mention this to show you that these people are interested in the production of good milk, that people in the remote sections can do it and they ought to be able to do it in other places.

The time is not far distant when the milk supply of the City of New Orleans will be equal to that of any city on the American continent.

Dr. Martin's reference to the low death rate among the babies is extremely interesting.

I thank you for this opportunity and on behalf of Dr. Martin, I do not know that there is anything I could add beyond expressing my appreciation for Dr. Martin to Dr. Robin for the discussion of the paper.

THE THEORETICAL PRINCIPLES AND THE PRACTICAL IMPORTANCE OF ELECTROCARDIOGRAPHY.*

GEORGE R. HERRMANN, M. D.,

NEW ORLEANS.

The electrical phenomena accompanying the heart beat were first detected about the middle of the nineteenth century. Kölliker and Müller as early as 1855 proved that each beat of the frog's heart

*Read before Orleans Parish Medical Society, February 28th, 1927.

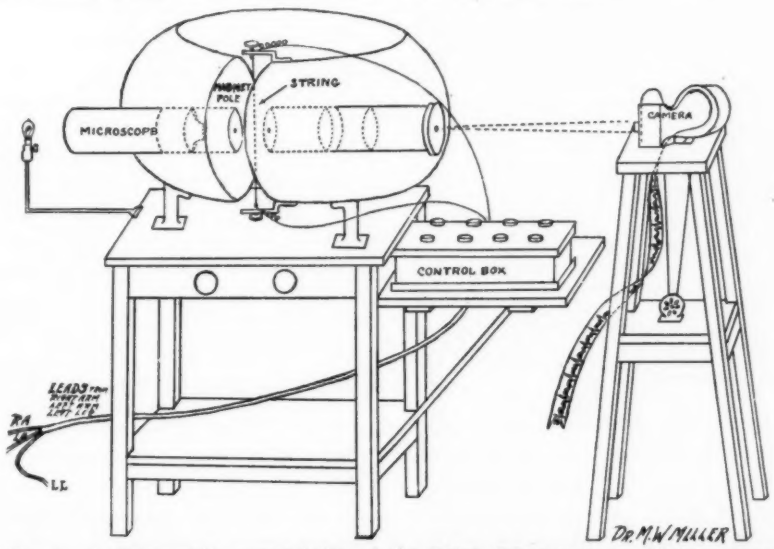

Fig. 1. A diagrammatic representation of the String Galvanometer or Electrocardiographic Outfit used for the detection and photographing of the effects of the minute electrical effects that precede, inaugurate and accompany each heart beat.

was accompanied by a difference of electrical potential. The cardiac electrical changes are transmitted from cell to cell, each cell activating an adjacent cell. In this way one may account for the extreme slowness of transmission of the electrical process. Ludwig and Waller in 1887 recorded the electrical phenomena accompanying the human heart beat by means of a capillary electrometer, the terminals of which were placed upon the chest wall in the precordial region.

THE ELECTROCARDIOGRAPH.

In 1903 Einthoven began his epoch-making studies with a delicate string galvanometer of the electrical mechanism of the heart beat. (Fig. 1.) The principle of the string galvanometer is simple. The string is a silvered or platinized quartz filament which is suspended between the poles of a powerful electromagnet. The electrical phenomena concerned in the heart beat produce only slight differences of potential of one-tenth to one millivolt. This low voltage results in a minute current which flows through the delicate string suspended in the powerful magnetic field of the galvanometer. The minute heart currents generating magnetic fields at right angles to its course, varying in intensity with the degree of the difference of potential, thus exerting varying degrees of attraction and repulsion of the magnetic field of the electromagnet and consequently greater or less movement of the string. The resulting deflections of the string are magnified by microscope lenses. The field is illuminated by an intense source of light and the magnified image of the deflected string is photographed on sensitive film or paper as the electrocardiogram.

The studies of Einthoven, Lewis, and many others have placed the science of electrocardiography on a firm foundation and made it our most valuable method of precision, giving us information about the cardiac mechanism which we can often elicit in no other way.

An accurate knowledge of the special anatomy and physiology of the heart is a prerequisite to a clear conception of electrocardiography and clinical cardiology in general. (Fig. 2.)

THE SPECIAL ANATOMY OF THE HEART.

The Sino-Auricular Node. The special anatomy of the heart in which we are interested includes the subendocardial microscopic structures that have to do with the genesis and propagation of the electrical phenomena that precede and accompany each heart beat. The first structure of importance is a peculiar mass of neuromuscular and connective tissue lying just beneath the epicardium in the sulcus terminalis at the junction of the superior vena cava and the right auricle, known, after its discoverers, as the Keith-Flack or sino-auricular node. This mass of specialized tissue receives nerve fibers from the vagi, especially the right vagus and sympathetics and an arterial branch from the left coronary artery. The excitatory process develops in this sino-auricular node, and for this reason the term "pace maker" of the heart is often applied to this tissue mass.

The Auriculo-Ventricular Node. The junctional tissues between the auricles and ventricles are of a similar neuromuscular nature. Fine fibers of specialized tissue beginning in the right side of the interauricular septum just beneath the endocardium near the thebesian valve of the coronary sinus, converge and unite to form another node described by Aschoff and Tawara. The fine fusiform fibers are intricately interlaced with nerve fibers, ganglion cells, arterioles and connective tissue to make up this auriculo-ventricular node.

The Bundle of His, the Branches and the Purkinje Network. A sharply demarcated group, the His bundle of specialized large fusiform cells in parallel arrangement, in fasciculi and ensheathed, extends from the A-V node horizontally forward and slightly downward for a distance of two centimeters

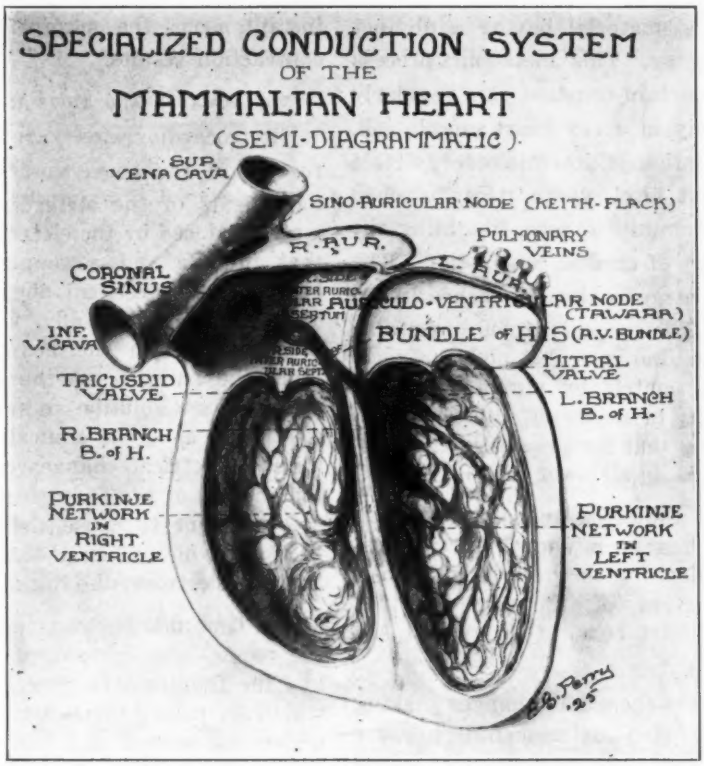

Fig. 2. A diagrammatic representation of the special anatomy of the heart which is intimately concerned in the origin or genesis and the conduction or propagation of the excitatory electrical process that precedes and accompanies each heart beat.

in the right side of the interauricular septum. The His bundle proceeds to the junction of the interauricular septum with the triangular membranous portion of the interventricular septum, the central fibrous body at the anterior border of which it divides into a right and a left branch, and saddles the interventricular septum. The right branch proceeds as a single strand to the base of the anterior papillary muscle, whence the specialized tissue rapidly spreads out just beneath the entire endocardium as the Purkinje arborization or syncitial network of the right ventricle. The left branch of the His bundle perforates the membrane at the anterior edge of the so-called undefended space, divides up immediately beneath the ventricular endocardium, just inferior to the point of junction of the right anterior and the posterior aortic cusps, into two main groups of fibers, one of which goes toward the base of the anterior and the other to the base of the posterior papillary muscle. From these main points the Purkinje network divides, ramifies subendocardially throughout the left ventricle. The vagus nerves have fibers distributed to the auriculo-ventricular node and the His bundle, but not beyond the bifurcation of the main A-V bundle in the mammalian heart.

THE SPECIAL PHYSIOLOGY OF THE HEART.

The physiology or mechanism of the normal heart beat is intimately associated with the special structures just described. The practical theory is that there is in each specialized and ordinary heart muscle cell a constant building up (anabolism) of cer-

tain combined material having a distinct potential energy. This metabolic process occurs at a certain constant rate regularly and uniformly in every heart muscle cell. The accumulation of potential energy rises to a constant level where it is "touched off," falls promptly to zero, liberating the kinetic energy of cardiac contraction. The level of discharge is always reached in the same time. The specialized neuromuscular tissue in the sino-auricular node or pacemaker holds control by virtue of its supreme liability or its faster rate of anabolism, assuming that the process in the ordinary muscle is on a slower incline.

The pH of the blood and of the specialized tissues has been shown to be intimately associated with the rate of genesis and propagation of the impulse that initiate the heart beat. (Carter and Andrus.)

The physico-chemical changes taking place in the sino-auricular node produce an electrical stimulus, a difference of potential, which can be detected by the string-galvanometer or electrocardiograph. This stimulus or impulse spreads with equal speed in all directions through the auricular muscle, "'touching off" all the products of anabolism and liberating the energy of the auricular contraction. The impulse is then taken up by its branches to the sub-endocardial arborizations of the Purkinje network of each ventricle. The time consumed by the stimulus in passing through the auriculo-ventricular node and His bundle normally never exceeds 0.18 seconds (the PR interval of the electrocardiogram) while the intraventricular spread takes place in 0.06 to 0.08 seconds (the QRS interval of the electrocardiogram). (Fig. 3.) Thus the spread of the impulse or excitation wave is very rapid, the rate of transmission through the specialized tissues being about 5,000 m.m. per second, while that through the ordinary heart muscle tissue is only 500 m.m. per second. The excitation of all parts is thus almost instantaneous, the energy is liberated and contraction results.

THE TRACINGS AND THEIR INTERPRETATION.

Electrocardiograms are photographic records of the above described successive movements of the string of the galvanometer, induced by the electrical phenomena that precede and accompany each heart beat. These electrical phenomena are indeed minute, especially when they are taken, not from the heart directly, but from the surfaces of the extremities by means of salt solution and metal conductor electrodes, as is the clinical practice. The minute electrical changes conducted from the surface of the body through the string are sufficient to cause the successive deflections, which when photographed constitute the electrocardiograms. (Fig. 3.)

The time marks, transverse lines across the paper, are shadows of the one broad and the four narrow sprockets of a wheel which are passed through the beam of light under the control of a tuning fork and a synchronous motor. One complete rotation of the wheel is accomplished in one-fifth of a second. The divisions indicated by the narrower sprockets, and consequently narrower lines, have a time value of one twenty-fifth or four one-hundredths of a second. The longitudinal lines are shadows of millimeter lines that are etched on the cylindrical lens of the camera. Every fifth millimeter line is made broader in order to facilitate measuring. Since the string of the galvanometer should always be so standardized that one millivolt moves it exactly one centimeter, the electrical value of the deflection can be determined by noting the extent of the movement of the string in millimeters, each of which under standard conditions has a value of a tenth of a millivolt.

The recorded deflections or waves have been arbitrarily named as indicated in the figure, P, Q, R, S, T, and rarely there is also a U. Any other designation might have suited equally well. In fact, the use of let-

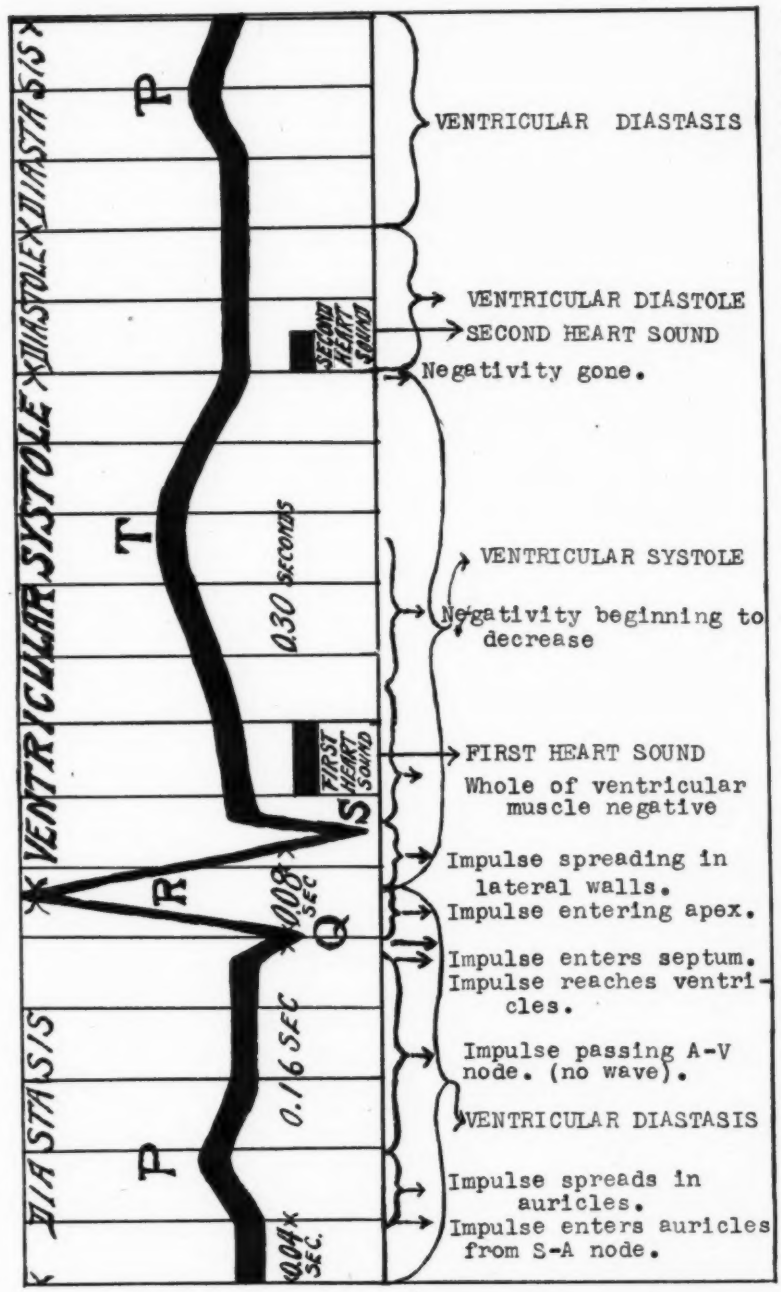

Fig. 3. The events of a single cardiac cycle as shown by the Electrocardiogram. With slight modifications from one of Dr. Richard Ashman's illustrations. Note that the conduction time of the impulse, from the beginning of P to Q is about 0.16 seconds, and that Q, R and S together last about 0.08 seconds, while the RT interval occupies about 0.30 seconds. The relations of the ventricular mechanical effects and the heart sounds to the electrocardiographic waves are indicated.

ters similar to those used in sphygmographic work might have been less confusing. It is, of course, too late to change now as much undue confusion might result. The waves of the electrocardiogram have been, as a result of animal experimental and human pathological studies, identified with certainty with activity in certain parts of the heart. Primarily, it must be understood that the electrocardiogram is a combination of right ventricular and of left ventricular effects.

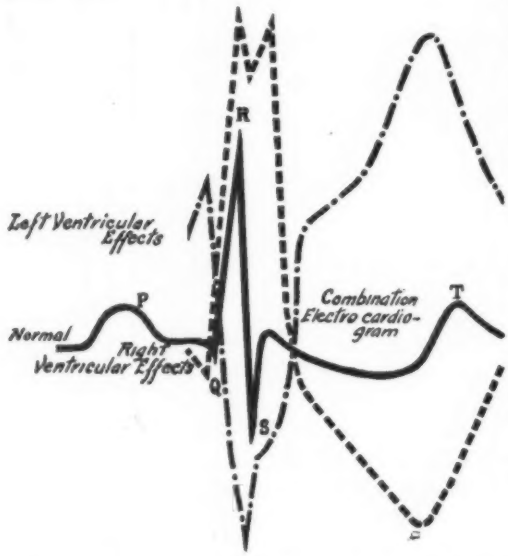

Fig. 4. A tracing of the electrical effects of the left heart (levogram) and of the right heart (dextrogram) and the normal combination electrocardiogram which is the algebraical summation or combination of right and left ventricular effects. These tracings were obtained by taking the normal electrocardiogram of a dog and then producing by pressure temporary complete block first in the left branch and then in His bundle.

The P wave is the result of changes in the auricles. The P Q or P R interval is measured from the beginning of the P waves and is the time required for the electrical activity to spread from the pacemaker or S A node through the auricle, the A V node and the His bundle to the ventricles. Normally this interval or A V conduction time is 0.12 to 0.18 seconds and any values above 0.18 seconds indicate disturbed A V conduction. The Q R S group traces the spread of the excitatory process through the right and left branches of the His bundle into the broader ramifications or arborizations of the Purkinje network. This spread normally consumes only .06 to .08 seconds, but any defect in either of the major branches produces a greater or less prolongation of this interval and accompanying changes in the T waves. The reasons for these changes lie in the fact that the normal electrocardiogram is the resultant of left and right ventricular effects, with the spread of an excitatory process which is ten times as rapid in the specialized tissue as in the heart muscle. A block in either major branch allows the opposite ventricle to receive its impulse first and to proceed in the inscription of its electrical effects, while the blocked ventricle awaits the slow progress of the excitatory process through the septal muscle and consequently inscribes its effects late and contracts asynchronously.

The T wave is most probably an inscription of the progress of the excitatory process from the Purkinje tissue through the ventricular wall or musculature and the deactivation process. Digitalization and myocardial changes produce changes in the T waves of all leads.

THE LEADS.

The three leads usually used in the routine taking of electrocardiograms are arbitrarily numbered I, II, and III. Lead I is taken from the right arm or hand to left arm or hand; lead II, from right arm or hand to left leg or foot; and lead III, from left arm or hand to left leg or foot. The three standard leads are used in order to have, as indicated in Figure 5, the electrical effects in three planes, and thus be able to determine persistent or temporary abnormal predominance of effects of one or the other ventricle.

THE ANALYSIS.

The analysis of electrocardiograms consists in the identification of each of the waves and an estimation of its normality; a determination of the exact lengths of the

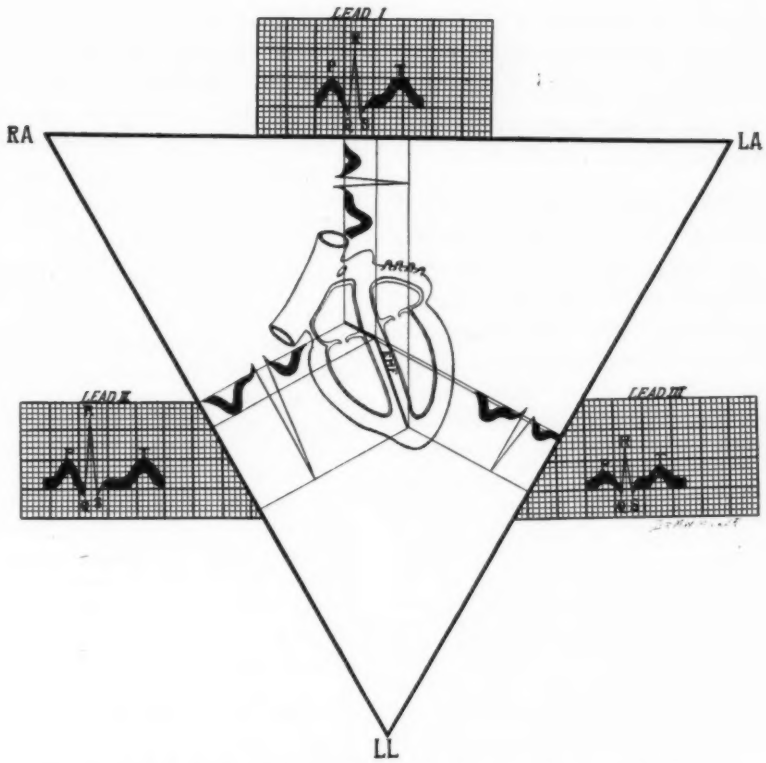

Fig. 5. A schematic representation of the position of the heart and its combined electrical effects or function E. M. F. with respect to the standard three leads. This is the equilateral triangle of Einthoven and the projections of the electrical forces into the plane of the lead indicates approximately its electrical value and the directions of its chief deflections in the respective lead.

P. R. and the Q. R. S. and sometimes, also, the S. T. intervals; an estimation of degree of predominance of the effects of one ventricle or the other; a recognition of any irregularity and its cause; and a correlation of the electrocardiographic findings with the known facts of cardiac mechanism disturbances and cardiac pathology.

Electrocardiograms graphically demonstrate the following more or less common disturbances: Sinus tachycardia; sinus bradycardia, from constant or temporary vagus stimulation; sinus arrhythmia; premature contractions, ectopics or extrasystoles, determining definitely the point of origin, whether auricular, junctional, or ventricular; paroxysmal tachycardia and especially the location of the abnormal ectopic pacemaker; auricular flutter, with the ratio of auricular to ventricular activity; auricular fibrillation; heart block, sinoauricular, atrioventricular, or bundle branch block, delayed conduction with only partial or complete block; and auriculo-ventricular rhythm.

Further evidence is given, as to abnormal course or direction of the excitatory process through the auricular muscle; changes in the ventricular muscle; predominance of one ventricle or the other; and the effect of drugs, such as digitalis and quinidine.

THE VALUE OF THE METHOD.

Electrocardiograms are not only invaluable, but in some conditions indispensable in the diagnosis and treatment of some types of heart disease. As pertinent facts

sustaining these contentions, I will mention some cardiac conditions which are not at all detectable nor determinable with certainty by any means other than electrocardiography.

Among these conditions are first of all various types of heart block, especially block in the intraventricular conduction tissues, the right or left branch of the His bundle, which may defy the diagnostic acumen of even the keenest clinician. Then, too, the exact degree of auriculo-ventricular conduction disturbance in the His bundle itself can often be determined absolutely in no other way. Sino-auricular fibrillation and auricular flutter with or without higher regular or irregular grades of block. Irregularity due to frequent premature contractions originating in various foci and the point of origin of a paroxysmal tachycardia can be established with certainty only with the aid of this method of precision. Congenital or pure primary dextrocardia, with its rotation of the heart axis and conduction tissues, yields pathognomic changes only in the electrocardiographic tracings.

Electrocardiographic tracings, furthermore, aid in the rational interpretation and evaluation of murmurs by indicating predominance in the electrical effects of the left or right ventricle. These signs of predominance are reliable in the presence of clinical evidence of enlargement.

Electrocardiographic curves furnish valuable graphic evidence, such as sharply inverted T waves, substantiating the diagnosis of coronary thrombosis, which the clinical picture of an abnormally prolonged attack of cardiac pain suggests.

Electrical axis fixation, which is suggested by the presence of identical electrocardiograms obtained with the patient in the supine, the left lateral, and the right lateral position is confirmatory evidence for the diagnosis of chance adhesive pericarditis. (Dieuaide.)

Electrocardiograms are of distinct help in the gauging of the effects on the heart of therapeutic agents. Electrocardiography provides another precise prognostic index; furthermore furnishes an absolute check on bedside diagnosis; a check which religiously used cannot but add to our proficiency, increase our facility in diagnosis, and sharpen our all too sluggish and too easily self-satisfied power of observation, at the same time insuring a visualizable understanding of the mechanism of the heart beat without which cardiological interpretation is antique and unscientific.

DISCUSSION.

Dr. B. R. Heninger (New Orleans): Dr. Herrmann is to be congratulated on his thorough interpretation of this subject before our Society in so short a period of time. He has shown us tonight what it took me about four years to learn.

The point I want to bring before you is not so much the valuable assistance the electrocardiogram gives in arriving at a diagnosis, but its prognostic value and the benefit derived from prompt institution of the indicated treatment. Therapy in heart disease is most important. At Touro, both in private and in ward cases, without inquiry, purely from the cardiogram, we get the desired information, this method proving of inestimable service in post-operative sequents—intestinal obstruction, digitalism, and so on. It is in cases where clinical diagnosis is difficult, as slow auricular fibrillation and in determining coronary thrombosis that the electrocardiographic tracing has its particular field of usefulness. Coronary thrombosis is a subject that should interest every surgeon, especially when considering operation on a patient over forty-five. Any person over forty-five who has abdominal pain should be subjected to rigid examination by cardiographic system. I recall very vividly several cases of coronary thrombosis incorrectly diagnosed and know physicians who at one time thought there was no such condition. I know of an instance where an operation performed for suspected gall-bladder disease turned out to be coronary thrombosis.

I voice my gratitude and appreciation to Dr. Herrmann for presenting a subject so interesting alike to internist and surgeon.

Dr. John H. Musser (New Orleans): In a very rapid survey such as Dr. Herrmann has just made it would be impossible to bring out every point of his subject, but I must say that he has broken

more records for rapid talking and succeeded in covering more ground in less than a half hour than the average man could do in two hours—and he did it very well.

There is one heart condition that it is difficult to diagnose and that is slow fibrillation. It has not been very generally recognized, yet it is a condition that is found with really great frequency and there is no way of diagnosing it accurately unless you have an electrocardiographic study. There is no difficulty in making a diagnosis of rapid auricular fibrillation; it is perfectly obvious to the surgeon, or to the gynecologist, or to anyone who is not doing internal medicine, what is wrong. But when there is a slow pulse, with heart rate around seventy, it is very difficult to make a diagnosis of a fibrillar irregularity. Some of the cases, without the use of the electrocardiograph, it is impossible to diagnose.

As a means of gaining prognostic information the instrument is invaluable. In cardiac physiology it has broadened our knowledge materially by the study of the action of the heart. In this connection I am reminded of a conversation I had with a quite prominent Philadelphia physician, known to most of the internists here, who was one of the pioneer workers in electrocardiography. It was in 1915, after he had been working with the string galvanometer for several years, that I had this talk with him. He said that he felt we had reached that stage of knowledge on the subject where we had discovered all that was to be known and he believed that the limit of the possibilities of the electrocardiograph had been attained. That was twelve years ago, before Dr. Herrmann studied medicine. Since that time our knowledge has been vastly broadened; we have learned a great deal more and there is still much more to be attained by means of this instrument. While we know now how to recognize the irregularities, there is still much to learn about cardiac physiology that has not as yet been touched.

I can add nothing to what has been said this evening, but would like to express my appreciation of the electrocardiograph. If any of you went through the struggle that a great many of us did when working with the polygraph, and stayed two or three hours attempting to get pulse graphs, which had to be printed in ink and often blurred out when you got half through, you can realize what a wonderful gift the electrocardiograph is, particularly in the study of cardiac irregularity. To send a case in and in a few minutes get a tracing of the reaction of the heart is a great thing to those interested in heart disease.

Dr. Chaillé Jamison (New Orleans): I think Drs. Musser and Herrmann struck a note that should be emphasized, that is, that the electrocardiograph gives us a graphic index of the electrical reactions of the heart; it leads us to the diagnosis of certain irregularities which we can arrive at in no other way. However, for those who have not kept up this study, I want to again emphasize the subject of cardiac reserve, the infections of the heart, both chronic and acute, which cannot be readily diagnosed by the electrocardiograph.

Dr. George R. Herrmann (closing): The several points mentioned by the discussants should certainly have been covered.

Dr. Heninger mentions the direction of our endeavors in this field from now on. Prognosis is a difficult matter under any circumstances, but with graphic records we may in the very near future be able to prognosticate with some degree of reliability.

The point brought out by Dr. Musser I intended to insert in the earlier group of conditions in which the electrocardiograph tracing is of great value and, as he states, almost absolutely necessary.

Dr. Jamison's remarks concerning the necessity of some further means of detecting early myocardial functional disturbances is quite well taken. Electrocardiograms may later be found to be invaluable in estimating this function, although at present we must admit that the field is limited.

The point brought out by Dr. Fossier concerning the electrocardiogram in acute infectious diseases of the heart I attempted to bring out when I mentioned the prolongation of the P R interval, which was the only evidence of acute rheumatic involvement of the heart in a few cases that I have seen as it was in his case.

THE NEWER CONCEPTION OF ACHYLIA GASTRICA.*

DANIEL N. SILVERMAN, M. D.,

NEW ORLEANS.

Thirty-five years ago Einhorn[1] advanced the idea that the absence of gastric secretion was a functional condition and designated to it the name, achylia gastrica. This thought was the first departure from the original idea that atrophy of the stomach always caused the suppression of stomach juices. Although the term achylia

*Read before the Orleans Parish Medical Society, March 14th, 1927.

was at first applied to the stomach which possessed neither ferments nor hydrochloric acid, it is at present generally employed to denote absence of hydrochloric acid (Faber.) The analysis of a given stomach's secretory function had been based solely on the response of the organ to the ingestion of a carbohydrate meal (Ewald test-breakfast or similar substance). Further studies by Rehfus[2] showed that in some instances the secretion of the stomach may be delayed. There are stomachs which will show no acid at the end of one hour but sometimes considerable quantity at intervals thereafter.

Certain substances are now known to be better promotors of the gastric secretion than the carbohydrate meal. The value of the extract of beef in this respect has recently been confirmed by Gompertz and Cohen,[3] who also demonstrated the succogogic action of yeast extract. However, there are cases of achlyia gastrica which do not respond to food substances and which require more powerful stimulants for a finer differentiation.

The animal experiments of Popielski,[4] Keeton,[5] Koch and Luckhardt,[6] and others proved that histamine is a drug with a marked stimulating effect on the gastric secretion in dogs and cats. The effect of histamine on the human gastric secretion was then observed by Carnot, Koskowski and Libert.[7] They introduced the duodenal tube into the stomach and injected the drug subcutaneously. By withdrawing the contents at intervals they noted an increased flow of gastric juice 30 to 55 minutes after injection, accompanied by an increased total acidity, free hydrochloric and proteolytic activity. In consequence of this work, Matheson and Ammon[8] carried out an investigation on twelve hospital patients, mostly convalescents and without any obvious disturbance of gastric function. By using small doses of histamine, subcutaneously, they reported the exciting power of the drug on the flow of gastric juice in man. The dose employed approximated 1.5 mg. of the salt (phosphate). No harmful gastric or general disturbances resulted and the authors suggested the possibility of employing histamine as a means of investigating the state of gastric secretory function and perhaps as a therapeutic agent.

Gompertz and Vorhaus[9] followed with their studies of the gastric response to histamine in various disorders of the stomach, particularly in cases of achylia gastrica. They believed the reaction to this compound promised to offer a means of differentiating between true achylia, *i. e.*, achylia with destruction of the secretory glands, and pseudo-achylia in which usually a functional inhibition of secretion occurs. In their seventeen cases of achylia gastrica, without sufficient numbers to group the cases, ten showed considerable amounts of free hydrochloric acid following histamine stimulation. In some cases of low acidity, the response to histamine reached the same figures as in those patients who showed a normal or increased acidity after the Ewald meal. In 66 per cent of their cases, Gompertz and Vorhaus[9] showed the maximum rate of secretion in from thirty to sixty minutes after the injection, 22 per cent attained the maximum in from 60 to 90 minutes, while 11 per cent reached it in 15 to 30 minutes.

In a series of studies on seventeen subjects, six of whom were normal, and eleven achlorhydrias, Dobson[10] found that the maximal effect from histamine stimulation is usually obtained at the twenty-five minute interval. He is led to conclude that histamine is a strong stimulus to gastric secretion, especially to the secretion of acid, and that true achylia gastrica may be a relatively infrequent condition.

The present report constitutes an analysis of several groups of cases presenting achylia gastrica with the view of differentiating the true from the functional type by means of histamine injection.

After having determined that the stomach fails to secrete acid after food

ingestion, aspiration of the fasting gastric contents is made on a subsequent day. The tube is then left in place. 1 c.c. of 1-1000 solution of histamine hydrochloride is injected subcutaneously. The gastric juice is allowed to flow or is aspirated every five minutes. The quantity of free hydrochloric acid in each sample is determined at the bed-side by the H-ion concentration method of Denis and Silverman.[11]

The largest group of achylia cases in this series, and the one in which the writer is especially interested, is associated with disturbances of the gallbladder. In this group the reaction of the stomach glands to histamine injection is most suggestive. Ten patients were tested and nine responded with normal to hyperacidity values. The achylia was persistent in one individual who was past the age of sixty and a mild diabetic. She was seen in consultation with Dr. Lemann because of an intractable diarrhea. Four of these gallbladder cases had a previous cholecystostomy but no claim is made that the operation produced the achylia. In one case, however, gastric analysis before cholecystostomy showed a hyperacidity. Katsch and Kalk[12] reported a case of cholecystitis in which the anacidity was responsive to histamine. Five months after removal of the gallbladder this responsiveness had disappeared. There is evidently further confirmation of the close relationship existing between the gallbladder and the secretory functions of its allied organs.

Achylia gastrica is a constant finding in pernicious anemia. The researches of Levine and Ladd,[13] Evans[14] and numerous other authorities have proven the invariable association of these two conditions. In a recent article, Grinker[15] advanced the opinion that normal gastric acidity may be present in pernicious anemia, and that the achylia which does occur is not predisposing. In his excellent critique of Grinker's report, Musser[16] states, "It would appear from the very brief case reports which he has presented that the diagnosis of pernicious anemia might well be questioned, particularly so when hematologists at the present time very generally accept the absence of free hydrochloric acid in the gastric contents as one of the necessary symptoms which go to make up the symptom complex of pernicious anemia." In support of this statement a group of eight cases with pernicious anemia were analyzed and failed to manifest any evidence of acid secretion even when stimulated with histamine. In this group, two women in their early thirties and with recent symptoms showed a permanent achylia. In one there was a marked clinical and hematological improvement following dietary treatment without any tendency towards recovery of the gastric secretion.

In three individuals with achylia gastrica vera, that is permanent suppression of gastric acidity following histamine injection, no causal agent could be determined. Some would speculate on this condition as a possible predisposing factor or forerunner of pernicious anemia.

Since the visits of Finsterer to this country a few years ago many more subtotal gastrectomies have been performed for the relief of peptic ulcer. He advocated the removal of the acid-bearing area of the stomach to prevent recurrence as well as obviate occurrence of the so-called marginal ulcer of gastro-enterostomy.

Through the courtesy of Dr. Graffagnino I have been privileged to observe three of his cases with Finsterer's operation performed years ago. The patients are in perfect health. Two of the cases failed to show any trace of hydrochloric acid, (in one of which the writer found a hyperacidity just prior to operation), whereas the third is able to secret a normal acidity following histamine.

I wish to express my thanks to Drs. Lemann and Graffagnino for the privilege of studying their cases, and my sincere appreciation of the valuable assistance ren-

dered by Drs. Efron and Wight of the Touro Resident Staff.

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DISCUSSION.

Dr. Allan Eustis: I do not know that I can add anything to the subject matter that Dr. Silverman presented before you, "The Newer Conception of Achylia Gastrica." The work is of intense interest and he is to be congratulated on taking a broader view of achylia than we have in the past, for it is a step in advance to recognize it as a symptom and not as a disease. Achylia gastrica is accepted as a diagnosis in so many of our larger hospitals, but I have thought for years that it was no more a diagnosis than tachycardia or fever. There is some cause for the achylia and if Dr. Silverman's paper has done nothing else, it will stimulate us to ascertain the reason for the achylia and this method will probably assist us in determining it—those disturbances of mechanical origin, those of the gastric mucosa or impaired function, just as we find the cause in a case of decompensated heart.

The principal reason Dr. Silverman asked me to open his discussion is because some years ago I did some work with histamine. In looking up the literature I came across an abstract in "Chemical Abstracts" in which histamine is mentioned as promoting pancreatic secretion. It is also of interest in this connection to notice the correlation between disease of the gall-bladder and the achylia gastrica. On account of the frequency of associated pancreatitis in chronic gall-bladder disease the pancreatitis may possibly be a causative factor in the achylia.

SOME FACTS ABOUT CANCER.*

URBAN MAES, M. D.,

NEW ORLEANS.

The last quarter of a century has witnessed a distinct change in the relations between the physician and the public. Then such a meeting as this was unheard of, today it is so usual as to pass without comment. The education of the laity in medical matters is progressing apace, thanks to the activities of the American College of Surgeons, the American Medical Association and similar bodies, and the happy results are evident on all sides. To take but a single illustration, the tremendous reduction in the death rate of tuberculosis is due not only to the achievements of medical science, splendid as they are, but to the increased knowledge on the part of the general public as to how to prevent the disease and how to treat it when it has occurred. Such bodies as the American Society for the Control of Cancer are attempting similar things for that last great scourge of mankind, and I am therefore grateful to you for giving me the opportunity of bringing before you tonight some of the knowledge concerning cancer which you, as social workers, should consider it your duty to spread among the unfortunate with whom you are brought into contact. For the unfortunate poor are too often the ignorant also, and ignorance, I say without hesitation, is cancer's strongest ally.

In some respects the situation has markedly improved in recent years. Thus Bloodgood tells us that during the decade from 1890 to 1900, 99 per cent of the patients examined for breast disease at the Hopkins Clinics required operation, while 85 per cent of those operated upon proved to have malignant disease, in most instances so far advanced that even the most radical procedure was frankly hopeless from the outset. Since 1920, on the other hand, operation has not been indicated in 50 per cent

*Read by invitation before the Louisiana State Conference for Social Betterment, March 17, 1927, in New Orleans.

of such cases, and only 25 per cent of those operated on have proved to have cancer.

Other aspects of the picture, however, are not so bright. Gynecologists tell us that more than 80 per cent of the cervical cancers they see have passed beyond the stage where operation could be attempted with the faintest hope of success, and the general surgeon is too often sickened to the soul by finding hopelessly inoperable conditions when he has opened an abdomen for suspected cancer of the internal organs. Obviously, in the face of such facts as these, we have traversed only a small portion of the road which leads to ultimate conquest.

Cancer is today the leading cause of death among adults. Approximately five hundred thousand people die yearly from it, nearly one hundred thousand of them here in America. It claims its victims at the rate of one every four minutes, and it more than equals the combined devastation of storms and earthquakes and volcanic eruptions throughout the world. Between the ages of fifty-five and seventy, one man out of every eight dies from cancer, and between the ages of forty-five and sixty-five, one woman out of every five dies from it. Moreover, on the surface, it seems to be increasing something like 2½ per cent yearly; it has apparently increased in the last quarter of a century 83.3 per cent among the whites and 88 per cent among the colored here in the United States alone.

Much of this increase, happily, is apparent rather than real. Increased accuracy in diagnosis explains part of it, and increased strictness on the part of health officials, who no longer tolerate vague causes of death, explains more. Moreover, increased longevity has made this malady, which is pre-eminently a disease of middle life and old age, apparently more frequent. Really, the increase in the cancer death rate is exactly proportionate to the increase in the common causes of death in those who have passed the prime of life, heart disease, nephritis, cerebral hemorrhage and diabetes. In other words, increased medical skill is prolonging lives which formerly would have been lost earlier from other conditions. As one writer puts it, every person saved from death in youth is one more potential victim for cancer in old age, every improvement in public health leads to an apparently increased cancer mortality, and the cancer incidence is increasing just about to the extent that people are kept from dying of something else. Even granting, however, that the disease is stationary and that the mortality is not really increasing, the death rate is still one which physicians cannot view with complacency or laymen without fear.

Our knowledge of cancer is still extremely limited. In reality, all we know is that it is the abnormal growth of inherently normal cells. The symmetry and regularity of organs and tissues of the body are due to some power of limiting normal cell growth, and when this inhibiting power, which is as yet unidentified, is lost, the cell growth runs riot. In other words, cells growing out of their natural environment and beyond their natural size, destroy first the local tissues which feed them and eventually kill the entire host.

Various theories have been advanced and discarded. The biochemical theory, to mention one, is based on the fact that ordinary salt is at least one of the potent factors underlying the disease in that it affects the chemistry of the circulating plasma in such a way that it feeds the cancer cells and allows them to grow, part of the claim being that organs with a large blood supply are predisposed to cancer. This is crediting nature with a grave error, in the first place, and in the second, the blood supply is always proportionate to functional activity. In proportion to size, to take but a single illustration, many times as much blood goes through the thyroid as through the brain, an admittedly vascular organ, yet neither of these is often the seat of malignant dis-

ease, so that the theory is apparently not tenable in its practical application.

The parasitic theory is equally untenable. Senn in particular disproved it by grafting bits of malignant tumors into pockets he had cut in the skin of his own forearms, with so little success that he eventually died of heart disease. Nuzum did have some success in transmitting breast cancer from a human being to white mice after culturing his material in ascitic fluid. He demonstrated a micro-organism in the cancer cell identical with the organism isolated from mouse cancer, and reproduced it experimentally in a small series of animals, but the results were not uniform and the experiment halted at this point.

Cancer is not hereditary in the accepted sense of the word. The work of Maude Slye would tend to prove that its transmission in mice obeys the laws of heredity originally propounded by Mendel. In other words, the appearance of cancer in families is a manifestation of the Mendelian theory, which recognizes two types of inherited characteristics, the dominant and the recessive. The recessive type shows cancer tendencies, and cancer therefore is not, as we ordinarily understand the term, truly hereditary.

Ignorant as we are about the actual etiology or causation of cancer, we are very sure of one thing, that certain conditions are definite precursors or forerunners of it. It begins frequently in moles or warts, harmless in themselves, which have become malignant through constant irritation over a long period of time. It appears in old scars, and it follows constant irritation of the tongue, lip and cheek from decayed teeth, defective bridge work, even lack of attention to oral hygiene. It is common among men who smoke, and I am not trying to be humorous when I venture the assertion that it may perhaps, in this generation, be equally common among women who smoke. It appears on the inside of the cheek in the East Indian races who chew the betel nut, which has a rough exterior. It has long been recognized as a source of peril among physicians who work with the X-ray. It appears frequently on the abdomen among the natives of Kashmir, who carry under their clothing small pans of coal for warmth. Cancer of the cervix is found almost exclusively among women who have borne children, and the predisposing cause is unquestionably the birth injuries which are apparent in some form or other in the cervix of every such woman. It is preceded by gastric ulcers in a fair percentage of cases or by hemorrhoids or any condition which gives rise to constant irritation along the digestive tract.

We have recognized for many years that irritation of some sort was a definite predisposing cause, but only recently has it been proved conclusively by laboratory experiment. The fourteenth annual report of the Cancer Commission of Harvard University contains the results of a study by Miss E. E. Jones in determining the susceptibility or immunity to a transplanted tumor in mice. The race of mice in which this particular tumor is found is susceptible in 100 per cent of the cases; that is, the transplanted tumor grows in every instance. But mice of another race are completely immune to it under ordinary circumstances. The addition to the inoculated tumor, however, of a piece of sterilized flannel results in the development of malignancy in about 15 per cent of the animals, seeming to prove that local irritation, no matter how simple, can overcome an inherited immunity which, without such irritation, is capable of preventing any growth whatever.

Cancer is not, as has been so often asserted, exclusively a disease of civilized peoples. Civilization seems to have nothing to do with the case, except that by increasing the life expectancy some thirty years, it adds proportionately as many possible people in whom the disease may

develop. In India, for instance, the life expectation for males is 26.6 years, whereas with us it is 54 years, which means that the number of males reaching the cancer age is just that much smaller than it is with us. Moreover, the chances of any but external cancer being recognized are small, and the absence of records and of certified causes of death are equally obvious sources of error. Finally, whenever clinics with modern facilities have been established in Eastern nations, it is always found that the incidence, all things considered, is about what it is in the civilized Western nations.

Part of the reason for the appalling death rate in cancer lies in the ignorance of the laity concerning its early symptoms, and their unwillingness to recognize them when they are present. It cannot be too emphatically stated that cancer in its early stages is a most treacherous disease in that it causes no pain and is apparently a trivial thing. Yet the person who treats it as such is literally gambling with death, with all the odds against him. Any local sore which does not heal within a reasonable time, any skin defect which tends to spread, may be cancer. Any lump in the breast, no matter how harmless it may seem, should be excised, and examined by a competent pathologist. It may be harmless, but in 90 per cent of women past forty it means cancer. Moreover, when cancer of the breast can be diagnosed clinically, that is, by inspection and palpation, in most instances it is so far advanced that even the most radical operation effects only a small percentage of cures.

Irregularities of menstruation are no more natural at forty-five than at twenty-five, bleeding is not a normal accompaniment of the menopause, and neither discharge nor bleeding is ever physiological after regular menstruation has ceased. Unfortunately, early cancer gives rise to no definite symptoms unless it is on the exposed surfaces of the body. In the stomach and other internal organs it may not be apparent until it is quite far advanced. Therefore in the cancer age any digestive disturbances, diarrhea, loss of weight, slight elevation of temperature, anemia, in short, any constitutional symptoms should be looked upon as evidence of trouble somewhere, and the investigation should not cease until cancer of the internal organs has been eliminated by every possible clinical and laboratory measure, and by exploration of the abdomen, if necessary.

Moreover, the patient, having recognized that something is wrong, and having submitted himself to his physician, should make sure that his physician knows his business. Education along these lines is needed not only by the laity. Even the best diagnostician makes his mistakes, and the members of the "wait and see" school make mistakes consistently. An unhealed sore, a vague lump, needs something more than examination by hand. It needs removal and examination by a pathologist, and the physician who advises his patient to wait and see what will happen is doing him a deadly and irretrievable wrong. A woman who consults a physician for uterine bleeding and is dismissed with ergot or some similar drug, without a careful pelvic examination, should seek another physician at once. As for cancer of the internal organs, I speak with special feeling; scarcely a month passes that I do not have handed over to me, as a general surgeon, a patient for whom I can do nothing beyond opening and closing the abdomen, because early symptoms were disregarded, and a hopelessly inoperable condition was permitted to develop.

Until we learn, or rather until we put into practice what we already know, that at some stage in its growth cancer is always a local disease, with cures possible and probable in most cases, our cancer mortality is not destined to improve. Bloodgood's figures again prove this conclusively. In the cases in the Hopkins Clinic in which the diagnosis of cancer of the breast could be made only by the path-

ologist, the five year cures averaged 80 per cent; where the diagnosis was made by the surgeon before operation, they averaged 25 per cent. Such evidence is conclusive.

Obviously, then, the proper treatment for cancer in every case in which it is possible is immediate radical removal. Morever, all definitely precancerous lesions should be either cured or removed. In all instances they may not become malignant, in fact, in the majority of cases they probably will not, but I agree with Bloodgood that every such operation cheats cancer of at least one potential victim. Unfortunately, however, surgery is not always possible. Gynecologists tell us that only 10 to 20 per cent of the cervical cancers which they see are operable, by which they mean that only in this small percentage is the disease truly local, which means again that it can usually be diagnosed only by the pathologist. The same proportion, in my experience, holds for cancer of the internal organs, the stomach, the large bowel, the rectum, etc.

What, then, are we to do for these other victims? We may, of course, perform a palliative operation, done to make the patient as comfortable as possible during the remainder of his life, with no expectation of a permanent cure. And we may use irradiation. Deep ray therapy has not given us the results which we once hoped for, and its employment promiscuously, without selection of cases, leaves many of these unfortunates in an even more deplorable condition than they were originally. Radium, likewise, must be used with great discrimination, but so used, it is a real boon. In cancer of the cervix particularly its results are sometimes little short of miraculous. The patient becomes clinically well, in a certain percentage of cases there is an apparent cure, and even in the advanced cases it lessens the infection and foul discharges which make these patients horrors to themselves and those about them. But radium should not be regarded as a substitute for the knife; most often it is resorted to because the local stage of the disease is passed and radical surgery is no longer possible.

Medicine is absolutely useless. There has never been a cure by drugs in which the diagnosis was not open to doubt. Salves, ointments, external applications, sera, vaccines, all the host of advertised cures are little more than get-rich-quick schemes for those who promulgate them. No field of human affliction is open to so much quackery as is cancer, and unfortunately the medical profession itself, in the person of some of its members, sometimes through ignorance, sometimes through a complete lack of scruples, becomes the tool of these charlatans. Throughout the civilized world today the cause and cure of cancer are alike being sought unremittingly, and when the truth is discovered, it will be proclaimed to the public through the proper channels quite as promptly as was the discovery of salvarsan, of diphtheria antitoxin and of insulin. Flee from the advertised cure for cancer as you would from the plague, for death stalks in its wake.

It might be well to mention one or two instances of the correct way in which the cancer question is being investigated. In the Hamburg clinic of Schottemüller, for instance, an investigation has been carried on for over three years, involving thousands of rats and mice, based on the admitted fact that cancer cells consume more sugar than do normal cells, and on the assumption that the successful treatment of the disease may lie in a starvation diet, with total removal of the sugar content. The matter is still in the stage of animal experimentation and it may never come to more, but it is being studied scientifically and honestly.

Better known, perhaps, is the work of Blair Bell of Liverpool, who is in charge of the English committee investigating the use of colloidal lead in cancer. The thoroughness and impartiality of this work,

and the extraordinary co-operation being received from the profession generally in England, are guarantees of its worth. Every case which is accepted for treatment is gone over by a board of examiners both before and after the lead is used, and no one man's opinion is final, so that whatever results have been secured are thoroughly authenticated, which, I might say in passing, differentiates such results as these from those attributed to quack cures. Animal experimentation is being carried on simultaneously with the work on human subjects, and biochemists and physiochemists are investigating the subject from every angle. There is no question but that lead has some effect on the cancer cell, though whether it will prove to be the curative agent for which we are looking it is still too early to say. At any rate, the ultimate solution of the problem lies in just such methods as Blair Bell and his committee are employing.

In conclusion, a few facts stand out in the prevailing confusion of the cancer situation. Cancer is not contagious and it is not hereditary as we ordinarily understand the term. Its primary cause is still unknown, but it is definitely proven that constant irritation is a predisposing cause. The ultimate reason for every cancer fatality is either procrastination or faulty diagnosis. The disease is essentially a local one, and prompt recognition of the early symptoms is imperative for a cure. The one successful treatment is surgery, supplemented by irradiation when indicated; roentgen-ray and radium are adjuncts to surgery rather than cures in themselves. Without exception, drugs, local applications and serum treatments are useless and worse than useless, in that they lull the sufferer with a false sense of well-being and security until the time has passed when the recognized methods of treatment can avail. Finally, dark as the outlook is, there are rays of light. Whether, as Dr. W. J. Mayo has recently suggested, a cancer immunity can be developed as can an immunity to diphtheria, scarlet fever and similar diseases, is questionable; it is highly desirable, certainly, but extremely improbable, in the face of our present knowledge. Passing, however, from the realm of speculation and setting our feet upon the firm ground of facts, we know definitely that cancer in its local stage is a curable disease, and every case of cured cancer is additional evidence that cancer be cured.

PSYCHIATRY FOR THE GENERAL PRACTITIONER.*

DAVID H. KELLER, M. D.
Central Louisiana State Hospital,
PINEVILLE, LA.

There are so many specialties in the practice of medicine and surgery that a general practitioner cannot be expected to become an expert in all of the specialties of the healing art. However, all general practitioners are presumed to have at least some knowledge of every specialty, and there are some who make an honest effort to become fairly well acquainted with the entire scope of medicine and surgery.

When it comes, however, to nervous and mental diseases there seems to be a disinclination on the part of the average practitioner to even learn the rudimentary facts. It is hard to determine whether this is due to lack of interest or because the specialty is somewhat uninviting to the average doctor. The fact remains that the study of mental diseases is practically an unknown field of effort except to those few who spend the greater part of their life segregated with the mentally abnormal; and these are finally looked upon as slightly psychopathic, by their fellow practitioners.

This being the case, I have thought it worth while to present some features of psychiatry which should be of general

*Read before the Rapides Parish Medical Society, April 4th, 1927.

knowledge to every physician. It will be noted that these remarks are mainly confined to the problems covered by diagnosis, prophylaxis and prognosis. The matter of treatment is purposely ignored as that can only be satisfactorily given in an institution. The family physician, however, has a sacred duty in the prevention of mental diseases, a decided responsibility in diagnosis, and it is to him that the family frequently looks for advice as to the future of the case. Thus it appears only proper that every physician should know enough about mental abnormalities so that he can fulfill this responsibility to his clientele.

The chief problem in diagnosis is the early recognition of the fact that the patient has a psychosis, combined with an ability to make at least a tentative diagnosis. It is astonishing how many physicians fail to realize that certain abnormal conduct constitutes a psychosis rather than a crime or a deliberate social error. A more liberal knowledge of psychiatry would be of great help in the proper treatment of many of the social problems of the community. Prophylaxis as far as insanity is concerned is also of the greatest value. The physician should be the teacher of his community and the intelligent citizen should be instructed that only by the prevention of inheritable mental abnormalities can the great increase of insanity be checked. Like breeds like, and the children of the abnormal will be abnormal. Anyone who doubts this fact can learn the truth by visiting any psychiatric hospital and studying the records. The great increase in insanity must be prevented and it can be—by sterilization of the mentally unfit.

It is also of the greatest importance that the physician understands just what can be done for psychiatric cases once they are diagnosed. Many cases have a hopeful prognosis, some have a chance for recovery and others will never recover. Each mental condition has its own prognosis and these prognoses can be easily learned. I would urge especially the greatest honesty in dealing with the families of the insane. Nothing can be gained either by deceiving them as to the outcome or delaying telling them the real status of the case. For the purpose of convenience I have, in this paper, divided human life into seven decades; and have assigned to each period one type of mental disease. I believe that this scheme in itself will be of general benefit to the general practitioner as presenting a simple method for the more rapid arriving at a possible diagnosis. It is not to be supposed that each mental disease I mention confines itself sharply to a certain ten year period of human existence, but the average is well preserved.

FIRST DECADE.

(Up to ten years of age)

The most common condition to be met in this period is one of the forms of feeblemindedness. Prenatal care, the avoidance of birth injuries, and the proper treatment of the diseases of childhood, such as scarlet fever, will go far toward the elimination of many of the acquired cases of mental deficiency. Hypothyroidism, producing myxedema, should be early recognized and treated. Especially interesting in this decade are the cases of Little's disease producing spastic hemiplegia, epileptiform convulsions and imbecility. The recognition and treatment of cranial hemorrhage at birth should do much to lessen the number of these in the future.

While epilepsy in childhood is frequently diagnosed, the fact should not be overlooked that this condition is usually concomitant with feebleminded states and so well is this appreciated that juvenile epileptics and feebleminded are often cared for in the same institution. It would not seem too much to ask each physician to familiarize himself with the Simon-Binet measuring scale of intelligence, as by the use of this scale the average case of feeblemindedness can be detected. The feebleminded child should be diagnosed as early

as possible, and if such facilities are available, should be given the benefit of special education in classes for backward children. The family, however, should not be deluded by spacious promises as to the results of such education. A feebleminded child with a four year old mentality can learn all that any four year old child can learn, but, no matter how strenuous the pedagogical effort may be, he can never be taught the facts which require a five or six year old brain to master. The parents should be told of the condition, and its hopelessness, and preparations should be made for the adult life of the defective child which will be in harmony with its maximum intellectual ability. Finally the family should be informed as to the matter of heredity, and every case of mental deficiency should be sterilized in order to prevent the appearance of similar defects in the future generations. Only by such treatment can we prevent the endless propagation of the feebleminded.

SECOND DECADE.

(From ten to twenty years)

This is the period in which cases of hebephrenic dementia precox are first recognized. As children these cases are markedly antisocial, introverted, and different from the rest of the neighborhood, but their apparent brilliancy in school life and their unusual exemplary moral conduct cause them to be greatly admired by the older generations. They usually do very well in high school, and at times are able to enter college. The mental break comes suddenly, after a period of confusion and excitement; following these preliminary symptoms there are frank hallucinations, splitting of the personality, negativism, and most sad of all a sharp antagonism and even hatred of the parents. Once the disease has been inaugurated, it is useless to hope for recovery, and the family should be advised to place the child in the state hospital for the insane, unless they are financially prepared to face an outlay of several thousand dollars a year for the remainder of the patient's life. The family practitioner should endeavor to make an early recognition of the dementia precox personality, and give advice to the family which will lead the potential patient away from the school-room, and if possible toward a life spent in the open, preferably among rural surroundings with a minimum of stress and mental responsibility. It is believed by many psychiatrists, though up to the present time not definitely proven, that if these cases can be recognized before adolescence, the sharp break to actual insanity can be prevented by proper supervision of every portion of the child's mental and physical life. It is my personal opinion that little can be done in the way of prophylaxis but it is worth while to make every effort to prevent unnecessary mental stress and strain. The general practitioner at times has trouble differentiating dementia precox from psychopathic personality. This will not be difficult if a careful history is obtained. In the one case it is always possible to obtain the precox personality whereas in the psychopathic there is an entirely different history of early life showing incorrigibility, and constant conflict with social customs and the law.

THIRD DECADE.

(Between twenty and thirty)

In this decade we have the individual facing the problems, financial and social, of early adult life. It is here that we frequently find the class of mental case known as the manic depressive psychosis. This disease, first clearly described by Kraeplin, consists of either periods of excitement, periods of depression, or in the same individual, excitement with depression alternating. It is very easy to recognize the average manic personality. They are extremely busy people but do not do anything real well. They dash from one enterprise to another without awaiting to finish anything. Irresponsible and active, they gain a reputation in the world of belonging to the "go-getter" class. Owing to their supreme egotism and boundless self-

confidence in their ability, they venture into financial enterprises which usually end in disaster. Such cases are known to the psychiatrist as manic personalities or as cases of hypomania. The depressive type is also usually easily recognized. To them the sky is always dark, and the flowers less sweet than a generation ago. They believe that the world is rapidly going to the dogs, and that in some way they are to blame for the existing condition. They feel incapable, inefficient and constantly suffer from an inferiority complex. Both of these types of individuals should be, if possible, protected from themselves. The more normal members of the family should be advised constantly to life, and by being busy, avoid continual individual from plunging headlong into what is often financial disaster for the family, while on the other hand the depressive individuals should be encouraged and stimulated to look on the bright side of life, and by being busy, avoid continual introspection and self-condemnation. The time frequently comes when the manic case grows to be such a nuisance to the community, and the depressive case such a danger to himself on account of possible suicide that institutional care is required. If the patient is committed, the family should be encouraged by the explanation that these conditions are often temporary, and that the attack is usually recovered from. Following recovery from the first attack these patients should be handled with the greatest tact and kindness by the family. There is no case where the rehabilitation of the recovered patient is more of a problem than with the manic depressive case and the private practitioner should aid and direct, not only the treatment of the family, but of the entire community, toward such cases upon their return home.

FOURTH DECADE.
(Between thirty and forty)

No class of insanity is capable of causing such constant disturbance in a small community as the true paranoiac. These cases are slow in development but usually become well recognized before the fortieth year. At first merely hypochondriacal, they later become grandiose and develop well systematized and fixed delusions of persecution. Feeling that they are right and the world is wrong they are prompted by their superiority complex to correct all the errors they see in their fellowman. As volunteer reformers they figure in constant litigation, and keep their little world in a state of continual unrest. The majority of these cases is the protection of the community the fact that they are not recognized as being insane, simply adds to the confusion. Being of the slowest development, they are not early diagnosed, and little or nothing can be done as far as prophylaxis is concerned.

The most important feature in these cases is the protection of the community from the false accusations of these individuals; the marital partners especially are frequently accused of the most outrageous crimes, and so cleverly is this done that the entire neighborhood, not recognizing that these accusations are the product of a diseased mind, often aid in the complete destruction of an innocent person's reputation. The physician, dentist, lawyer and pastor frequently become deeply involved in these cases because of their professional and ethical relationship. Once the diagnosis is made it is best to consider every statement of these paranoiacs untrue unless sustained by the most careful and complete investigation. Frequently the only relief that the family and community can obtain is to commit these cases to a state hospital, and if this is done the physician should inform the family, once the diagnosis is made by the psychiatrist, that no hopes can be entertained for future recovery.

FIFTH DECADE.
(Between forty and fifty)

Whenever the attention of the physician is called to a patient, who, between the age of forty and fifty, shows a sudden and

marked change in personality with symptoms of neurasthenia, the first thought should be to eliminate the possibility of general paralysis. This final result of luetic infection comes unexpectedly, many years after the primary chancre has come, gone and been forgotten. Often the victim, thoroughly reformed from early vices, has become a respectable member of the community, and syphilis is the last disease considered or thought of by the practitioner. However, if there is a change in personality, accompanied by definite neurology, such as tremor, rigid or irregular pupils, changes in the deep reflexes, an ironing out of the facial expression with a loss of clearness in speech, then paresis must always be considered and the case should be referred to the laboratory for examination of blood and spinal fluid, and the psychiatrist for the finer mental tests.

The early diagnosis of paresis is often of greater importance to the family than to the patient. These men frequently become grandiose, and possessed of a great sense of business ability, and through reckless investments the entire funds of a family may be lost before it is realized that the head of the family is insane. The prophylaxis of paresis consists in the early teaching of sexual morals to the young and the immediate, and unremitting treatment of syphilis from the hour the chancre is diagnosed. In other words the prophylaxis of paresis must start twenty years before the symptoms of mental disease appear. Once the symptoms are so pronounced that a diagnosis of paresis can be made, the time has passed to expect any curative results from treatment. The usual expectancy of life is from two to five years after the disease is diagnosed and the family should always be told that the apparent improvement, known as the remission, does not mean a cure, but that the disease is always fatal.

SIXTH DECADE.

(Fifty to sixty years)

Melancholia is distinctly a disease of the involutional period. So true is this that our nomenclature now terms the condition "Involution Melancholia." With the mental symptoms, appears premature ageing, and in women,—an early menopause. The psychic picture is distinctive and easily diagnosed. Agitated depression, self-accusation, constant worry, insomnia, and loss of weight in the presenilium form a symptom complex that is easily recognized. The onset frequently follows periods of grief and stress, such as are the result of sickness and death of loved ones. Once the disease is recognized the only rational treatment is institutional care. The family should be told that the outlook is very unfavorable for recovery and that, while slight improvement can be expected under hospital treatment, still the depression will continue. Often the agitation is so continued in these cases that death comes as a result of exhaustion. It would seem reasonable to believe that as the condition is associated with the menopause that glandular treatment would be of benefit but so far no form of medication has yielded any satisfactory results.

SEVENTH DECADE.

(Sixty to Seventy)

There are few problems in economics that present more difficulty than the modern care of the aged. In past ages the old people were cared for by their children in their homes. The American home is rapidly disappearing, and with the increasing social and financial demands made upon the younger generation by the modern social customs, it appears more and more difficult to care for the decrepit and senile outside of state institutions. Each year the demands made upon such hospitals are increasing in number and urgency.

Everyone who lives long enough grows old, and most old people seem odd and peculiar to the younger generations. The children and grandchildren often seem to have neither time, understanding, nor sympathy enough to care for these unfortunates who have committed no error except to outlive their usefulness. In such

cases the family physician has an unusual opportunity to effect an adjustment and arrange methods of care which will enable these old people to remain at home. Most of them do not need more than a warm place by the fire, simple food, and kindly care. However, when arteriosclerosis and cardio-nephritic conditions add their symptomatology to that of simple senility, there are often periods of confusion, disorientation, and mild excitement. Yet, even these symptoms subside rapidly under the simplest care in institutions, and there is no reason why the same favorable results should not be obtained in the home.

The prognosis, of course, is hopeless as to recovery, but these cases can be made comfortable and easily provided with all the necessities of life, and some of its comforts. It is a reflection upon modern civilization to believe that the only way to care for these unfortunates is to place them in a state institution. There are greater things in life than money and amusement, and every community and family must ultimately be judged by the care and consideration they give their aged and infirm.

SUMMARY.

1. Every general practitioner should know at least the fundamentals of psychiatry.

2. Each decade of life has its peculiar mental condition, the diagnosis of which presents no insuperable difficulties to the family physician.

3. The general physician has definite responsibilities to his clientele in matters of prophylaxis of mental disease, advice concerning the probable prognosis and ultimate methods of care of the psychiatric patient.

CASE REPORTS AND CLINICAL SUGGESTIONS

ACUTE ENCEPHALITIS.

(CASE REPORT)

MAURICE CAMPAGNA, M. D.,

NEW ORLEANS.

C. F. B., a white boy aged 19 years, was admitted to the Mercy Hospital, February 13, 1927, with the following history:

The patient retired Saturday, Feb. 12, 1927, as was his custom at about nine o'clock with no noticeable complaint, except a feeling of being tired, having worked hard that day. At about 12 o'clock midnight the lad's father, upon retiring, noticed that the bed linen was soiled, and on investigating found that the patient had involuntarily defecated and voided in bed. He immediately awakened the lad who was sleeping soundly and reprimanded him. At this time it was noticed that he had a numbness of his right arm. Believing this to be postural, the affected member was massaged with alcohol and the patient dropped back to sleep. At eight o'clock, upon being aroused, he complained of an inability to use his right arm and soon thereafter vomited.

Upon being summoned to see the patient I found that the boy was unable to talk. He was conscious and was able to move all members except the right arm. He was immediately removed to the Mercy Hospital where it was found that during the interim of the first examination and his admission to the hospital he had lost the use of his right leg.

Physical examination revealed a fairly well developed and nourished white male about nineteen years of age, five feet six inches tall, weight about one hundred and thirty pounds. The temperature was 101° F. (rectal), pulse 88, respiration 30. The lad was somewhat anemic and of an asthenic type. The pupils were mid-dilated, and reacted to light sluggishly; ear, nose and throat were negative for pathology. The facial expression was absent on right side. The chest was bilaterally symmetrical, expansion was good. The heart and lungs were normal. The abdomen was rigid, more so on the right side than on the left, and no organs were palpable. The genitalia were normal. There was right hemiplegia of the spastic type. The reflexes showed a 2 plus Babinski; the right knee jerk was 3 plus as compared to the left knee jerk which was 1 plus; the ankle clonus two plus. All other reflexes were exaggerated.

Laboratory findings: The total white cell count was 17,250, of which 18 per cent were small mononuclears, 1 per cent large mononuclears, and 81 per cent polymorphonuclears.

Spinal puncture: Forty-five cc. of clear fluid were removed under decided pressure, with 200 cells per c. mm. The Wassermann was negative. The smear showed only polymorphonuclear cells without bacteria. The cultured fluid showed no growth. A second spinal puncture showed an increased pressure with the same findings as the first except a diminution of the cells, with a great deal of degenerated neutrophiles.

The *roentgen ray* showed no opacity in the cranial vault. The sinuses were negative, and the mastoid cells clears.

The patient died February 17, 1927, exactly 100 hours after the onset of illness.

Autopsy findings: The brain was somewhat dry over the vortex, but showed some edema at the base. The cortical vessels showed marked congestion, and a few very small petechial hemorrhages. The organ was very soft in consistency, especially over the left hemisphere, which was somewhat larger than the right. On section there was found throughout the left hemisphere marked injection and numerous small petechial hemorrhages. These were generally present in all the lobes and were more marked just beneath the grey matter. Throughout, there was also found marked edema, making the white substance soft and of jelly-like consistency. The right hemisphere showed some injection and a few petechial hemorrhage, but to a much less extent than the left hemisphere. The lateral ventricles and the third ventricle were of normal size and contained a small amount of clear fluid. The choroid plexus showed congestion. The basal ganglia and mid-brain showed slight congestion. The cerebellum showed a marked injection and some edema of the inferior surface.

Microscopic examination of the tissues showed a marked congestion of the larger vessels and capillaries throughout the brain and meninges. The brain showed extensive edema, congestion, diffuse infiltration of moderate number of polymorphonuclear and lymphoid cells. The capillaries showed congestion, occasional rupture with petechial hemorrhage, and some showed exudation of a few polymorphonuclear and lymphoid cells in the surrounding tissue.

Smears and cultures from the brain substance were negative. Rabbits inoculated subcutaneously and into the masseter muscle showed no ill effects.

SUMMARY.

A case of acute encephalitis is reported with a sudden onset and no prodromata in an apparently previously healthy individual, terminating fatally within four days, and with no known etiological factor.

PHYSICIANS AND LIQUOR PRESCRIPTIONS.

A recent editorial in the State Times of Baton Rouge, protesting rather strongly against the physician who prescribes alcohol without observation of the laws which circumvent reputable practitioners, has been answered by Dr. C. A. Weiss, one of the Councilors of the Louisiana State Medical Society. Dr. Weiss says in part:

"It is unfortunate that the physician in the natural pursuit of his calling in curing and healing the sick must prescribe pain allaying and soothing as well as stimulating drugs. In order to be properly qualified to administer these drugs he must follow a prescribed course of study, stand state board examinations and qualify with his national and state governments. The federal government gives him a number, just as it does a distiller or tobacconist, by which he is ever afterwards known to his government. We are compelled to make yearly renewals of this number, at the same time paying the government and state for the privilege of this renewal. When we are given our number we are also given a book of several hundred pages setting forth, what, when, where, how and in what quantity we are allowed to prescribe any of the narcotic or pain relieving drugs. For the violation of any of these laws the doctor is subject to a fine of as much as $2,000 or an imprisonment up to five years. In order to obtain these same drugs for the administration to his patients he must purchase from the federal government and state board of health certain forms issued by the authorities for this purpose, and in this state must write the prescription on special duplicate prescription blanks sold by the board of health. Failure to comply with these laws and regulations cause the doctor many more petty annoyances. The law abiding American citizen can move anywhere at any time and carry on his trade or profession unmolested. But not so with the reputable medical practitioner.

NEW ORLEANS
Medical and Surgical Journal

Established 1844

Published by the Louisiana State Medical Society under the jurisdiction of the following named Journal Committee:

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For two years, Paul J. Gelpi, M. D., Lucien A. Ledoux, M. D.
For one year, H. W. Kostmayer, M. D., *Secretary;* Oscar Dowling, M. D.

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THE JOURNAL *does not hold itself responsible for statements made by any contributor.*

Manuscripts should be addressed to the Editor, 1551 Canal St., New Orleans, La.

AN ANNOUNCEMENT.

It is with the most sincere regret that we are obliged to announce the resignation of Dr. H. W. E. Walther from the position of Editor of the New Orleans Medical and Surgical Journal. Dr. Walther has for nearly four years given his time and services unsparingly to the Journal. He has been devoted and assiduous to his Editorial duties, according to them more of his time than he could well afford in the busy and active life of a practitioner of the healing art of medicine. He has sacrificed himself and always has he been willing to give up other things when his duties to the Journal demanded or required such a relinquishment. The results of his efforts, and those of the State Editorial Committee, the managing editor and his associates, can be appreciated readily by a comparison of the Journal of three years ago with that of the present day. Larger in size by far, increasing its pages from an average of 47 to an average of 89 pages of reading matter, better in content and appearance as a result of change in type and size of page, and more carefully edited than in former years, the Journal now stands as one of the best of the State magazines that represent the medical community of organized medicine in the various irregular localities marked off by arbitrary or natural boundaries. To Dr. Walther all credit should be given by the members of the Louisiana and Mississippi State Societies for his efforts, perhaps apparently indirect, but not the less actually directly affecting their medical life and their professional outlook.

It is with a certain feeling of editorial inadequacy that the successor of Dr. Walther replaces him. The high standards set and the achievements accomplished by his predecessor makes the new Editor realize fully how difficult it will be to supplant him. However, it is with the most earnest desire, and most ardent wish to carry on the splendid example already set, that the new piece of work is undertaken.

In conducting a medical journal that represents the organization of a state or states, certain limitations are placed on the Editor. It is not his to pick and choose. Articles which may be of general interest, of especial scientific value, or of great merit, can not be selected always because of the obligations of the Journal to the State Society. This is as it should be. Every member of organized medicine should have the opportunity offered him to express his ideas and to present the results of his studies and observations. He should have his forum and his press wherein his ratiocinations may be presented to the medical world. The affording of this is one of the important functions of the State Society at its Annual Meeting, and of the State Journal throughout the year. It will be the duty and the pleasure of the Editor

to further to the best of his ability the desire of any member of the two state medical organizations who may wish to make use of the periodical which represents him.

In order to present subjects of general interest, it is proposed to publish from time to time reviews of subjects which may appeal to the large body of readers. These articles, surveys of the literature largely, will be presented with the hope that they will bring up to date knowledge of the particular subject under discussion. With the great mass of constantly piling up information about this or that disease, test, operation or method of treatment, it is impossible for a man, unless he is omnivorous in his reading, to keep at his finger tips the latest details or the diffusely published results of all these papers. It will be the purpose of these critical essays to give a general inspection of the particular field reviewed at the time.

It is also to be hoped that it will be possible to establish and to secure contributions to a department which will deal with clinical notes and case reports. It seems a great pity that the large number of interesting cases that are observed in this and the surrounding community are not reported. The failure to do so lies in the unwillingness of the observer to record single cases. A series of cases representing the same unusual manifestations may be seen in a few very large hospitals and clinics, but the average physician is not in a position to command a large service nor to see a great many patients. It must not be forgotten that a number of isolated well studied case reports, prepared by members of the profession throughout the community, will soon make up a series upon which to base a careful review of the rare and unusual cases, or to prepare a dissertation on the exceptional in a commonplace condition. This also appears to be one of the functions of the State Journal which should appeal to the enlightened student of medicine, be he a country practitioner who sees many interesting cases, rarely reported, or an urban practitioner with a service in the wards of a large hospital. The institution of publishing the reports of various hospital staffs will in part only fulfill the need of recording cases, autopsies, operative methods and results which should be given to the reading public. There is room for much more of this type of work.

The Editor would like to call attention to the necessity of authors giving exact references when referring to the work of others. An inexact, wrong, or incomplete reference is a tremendous source of irritation and trouble to the reader who wishes to look up the article mentioned. In the majority of cases it is worse than useless. With this thought in mind, it seems right to request authors to give the name and initials of the author referred to, the Journal in which the article is published, with the volume number, page and year of publication.

Lastly, your Editor wishes to call on the members of the two constituent State Societies represented by the Journal, to help and assist him in his editorial duties. Criticism of any kind will at all times be welcomed, but constructive criticism alone is valuable, destructive complaints, depressing and demoralizing.

THE FIFE BROTHERS RELEASED.

It was with a distinct feeling of surprise, not to say disgust, that organized medicine of Louisiana read of the pardoning of the Fife brothers, notorious chiropractors of the state. These men had been convicted by a jury of their peers; the trial findings had been substantiated through all courts of appeal, up to the Supreme Court of the United States, and now all this is to be set aside, presumably because of a large petition, signed by thousands who did not know just what the signing of such a petition meant. To the members of the laity, chiropractic repre-

sents only a form of treatment. They do not realize that in States less well protected by Medical Practice Acts than is Louisiana, the chiropractor not only treats, but also diagnoses disease. Only a few week's training is required to secure a license to practice. The medical man realizes his shortcomings and difficulties after a minimum training of six years. He appreciates that it takes years to make a doctor. Knowing this he attempts to protect the public by compelling all men who would treat and diagnose disease to achieve a certain standard before being given the right to take the life of an individual in his hands. This is done with a spirit of altruism alone, a spirit which is found in no other profession. When some one near and close to them dies of diphtheria or some other preventable disease, treated by a chiropractor, then, and perhaps then alone, will certain citizens appreciate the value of maintaining high standards in the treatment of disease.

THE FLOOD AND THE PARISH HEALTH OFFICERS.

The recent disaster has demonstrated the value and effectiveness of the commoner forms of health protective measures. Thousands of people have been rendered homeless by the flood, have been torn from their homes and environment and forced to mingle indiscriminately with other people in a similar plight. They have been of necessity grouped together in the close and intimate contact of the refugee camps, yet not one single instance of a serious epidemic has occurred in all of the camps throughout the State. This speaks volumes for the success of the united medical precautions of smallpox and typhoid vaccinations and the attention to sanitation and water supply.

The Parish and Municipal Health Officers and their assistants have sacrificed themselves both physically and financially that the work might be accomplished with smoothness and efficiency whenever the concentration camps chanced to fall within their territory. All honor and respect, as well as the gratitude of a healthy people, the only reward, should be theirs.

It may not be inappropriate to mention here that the Louisiana Constitution directs the establishment of State, Parish and Municipal Boards of Health Under this mandate the Legislature promulgated Act 79 of 1921, amended by 296 of 1926, which provides the authorization under which these health organizations are constituted. At the same time it makes the appointment of health officials for the parishes and municipalities mandatory. In the event that a parish or municipality is financially unable to sustain a local body, the Legislature provides for a district organization.

The unfortunate feature of health work is that very little and often no salary at all is attached to the responsible position of Health Officer. It is equally unfortunate that oftentimes those who have accepted the positions knowing the conditions under which they are expected to give their time and energies become dissatisfied. This leads to work at cross purposes, or no work at all, and often nullifies the effect of a position, the duties of which should be discharged with diligence and enthusiasm. It not infrequently happens that a police jury or a community fails entirely to appoint a health officer. In this instance it becomes incumbent upon the President of the State Board of Health to nominate one. While legal this action obviously is not desirable, if it can possibly be avoided. What we need to circumvent these impasses which make for friction and ineffective work is, of course, a solid professional and public sentiment to back the doctor up. The Supreme Court has passed on the constitutionality of the Health Act and finds it valid. If the medical profession will only give it their strong moral support, Louisiana will have a State health service second to none.

VALE—SALUE.

Elsewhere in these pages reference is made to the retirement of Dr. H. W. E. Walther from the active editorial management of the Journal after four years of diligent service. It is with regret that the Journal Committee sees him retire from the position in which he has contributed so industriously and successfully to the upbuilding of the Journal. Our regret is lessened by the knowledge that it is the desire to contribute more directly to medical literature which necessitates Dr. Walther's resignation. We would not willingly stand in the way of our associate's *self-realization*, to borrow an expression of Dr. Brandt V. B. Dixon.

The Committee is fortunate enough to be able to announce its acquisition of Dr. John H. Musser to fill the vacancy left by the loss of Dr. Walther. Dr. Musser has already, as full-time professor in charge of the Department of Medicine, School of Medicine, the Tulane University of Louisiana, made a place for himself in Louisiana medical circles. In addition to his general educational preparation and his professional attainments, he brings to his new task a considerable experience with editorial work in connection with the American Journal of Medical Sciences. His freedom from the irregular calls of private practice will permit of the methodical allocation of part of his time to the task of building the Journal up to higher levels of usefulness. We are confident that time will prove the Committee's choice to be a good one.

CORRESPONDENCE.

To the Members of the Louisiana State Medical Society:

Greetings:

Some parts of our fair state are just emerging from the great catastrophe of the flood disaster; although it has been a terrible ordeal, we all realize that, while some suffered great loss, the experience will, in the final outcome, prove, as Hon. Herbert Hoover has pointed out, a blessing in disguise, inasmuch as flood preventive measures will be taken in the future.

It will be recalled that our House of Delegates passed resolutions, at the New Orleans meeting, proffering the resources of organized medicine in this state, "for emergency relief in disaster"; this is in accordance with the general plan of the American Medical Association. We were—and always are—ready and willing to live up to this offer; fortunately, however, no organized medical relief was needed in any emergency, for every crevasse was anticipated and the Red Cross and State Board of Health, who had so wisely prepared, had men on the ground to render necessary medical and sanitary aid as needed. Thankful to say, some individual members of our organization volunteered their services to the State Board of Health and were assigned to certain concentration camps; several others were ready to go, but not needed. I, having heard that more were wanted at Opelousas, had the information published and two capable physicians and a sanitary engineer got in touch with me, but there were no vacancies at the time. As a further proof that there was no paucity of doctors, I might mention that, although our resolutions were promptly communicated to Hon. John M. Parker, in supreme charge of flood relief work, we received no calls for aid from him and he expressed the hope that conditions would not become such that he would have to call upon us.

Now, however, there is a possibility that, even yet, some of us may be needed; should epidemics of any severity result from this flood, those of us who can get off should be ready to go; therefore, it behooves all those in this position to give their names to the authorities, viz: State Board of Health, Red Cross or Hon. John M. Parker, to be called should the necessity arise.

Before closing, I want to commend the preparedness of the New Orleans profession, organized under the auspices of the Orleans Parish Society, with President Fossier in charge, which was ready to protect the health of the city, had it been visited by the dire calamity of a flood, so gloomily predicted by many pessimists; this would have been a REAL need for "emergency relief in disaster," as the possibilities from insanitation and pollution in such a large city would have strained medical resources to combat them.

Things are never so bad that they might not have been worse and, while we extend our sincere sympathy to those who were so unfortunate as to have their homes or communities inundated, we hope that the "silver lining" to the cloud will soon appear and that our state will emerge greater, happier and more prosperous than ever.

Fraternally yours,

ARTHUR A. HEROLD,
President.

TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

The Board of Directors has held one meeting and the Society one regular Scientific Meeting and one Joint Clinical Meeting with the Charity Hospital Staff during this past month of June.

The Board of Directors has approved the question of group insurance. This was submitted to the General Membership at the regular scientific meeting and was also approved. If 75 per cent of the membership subscribes to this insurance it will go into effect. This insurance calls for a $3,000 policy to each of the members subscribing, the premium of this policy being about $13.00 a thousand. This premium payable quarterly with the dues of the Society or annually if desired. Aside from the low premium rate another feature in considering this insurance is that there is to be no physical examination. Fuller details of this insurance have been mailed to each of the members and it is requested that those in favor or against this plan of insurance send in their replies as soon as possible to the office of the Society.

Dr. Sam C. Cohen, Dr. Lily L. Dismuke, Dr. Paul R. Neal and Dr. Thomas H. Oliphant were elected to active membership in the Society.

At the regular scientific meeting it was our pleasure to have as our guest Dr. Wm. B. Fisk, chief surgeon of the International Harvester Company of Chicago, Illinois, who read a paper on Osteomyelitis of the Terminal Phalanges.

Also a guest of the Society was Dr. Valeria Parker, field director of the National Society of Social Hygiene, who gave an interesting talk on the Social Hygiene Program.

The following papers were read at this meeting:

"Personal Observation and Immediate End Results in Gun Shot Wounds of the Abdomen," by Dr. Martin O. Miller.

"Visceral Injuries in Gun Shot Wounds of the Abdomen," by Dr. Frank L. Loria.

A joint discussion of these two papers was opened by Dr. Jerome E. Landry and closed by Dr. Miller and Dr. Loria.

At the joint Clinical Meeting interesting cases were presented by the following: Drs. C. Jeff Miller, Urban Maes, Joseph Hume, P. A. McIlhenny, George R. Herrmann, Muir Bradburn, E. L. King, H. Theodore Simon.

The full stenographic notes of these cases will be published in an early edition of the Journal.

During the month of July there will be only one meeting of the General Body, this being the Second Quarterly Executive Meeting. After this the Society will go into summer recess until the first meeting in October.

The membership of the Society is 489.

REPORT OF TREASURER.

Annual Book Balance, 4/28/27	$4,330.43
Receipts during May	329.33
	$4,659.76
Expenditures	3,671.18
	$ 988.58
Outstanding Checks	7.46
Bank Balance, 6/1/27	$ 996.04

REPORT OF LIBRARIAN.

The Assistant Librarian was in Washington, May 16-19, according to the instruction of the Board, to represent this Library at the thirtieth annual meeting of the Medical Library Association. Over 60 medical librarians were in attendance and most profitable hours were spent in discussion of medical library problems. A detailed written report is being prepared to be read to the Society at such time as the Board shall designate. The total of expense for the trip, including railroad and Pullman fares, hotel, meals, etc., amounted to $123.39.

Since the return of the Assistant Librarian, the reference work has been very heavy, both from the accumulation during her absence and current calls. Four bibliographies have been prepared and added to our files on subjects as follows:

Tumors of the Pericardium

Tumors in Infancy and Childhood

Sickle-Cell Anemia

Lipiodol in the Roentgenography of Fallopian Tubes.

Beginning with June 1, a record is being kept of reference calls in the Library, exclusive of calls for particular books, etc. It is thought that this will prove interesting in showing the subjects of particular attention just now, and the types of calls which the Library endeavors to fill.

Gifts have been received during May from Northwestern University Medical School Library, Marquette Medical Library, University of Indi-

ana Medical School Library, Tulane University Medical School and Dr. Joseph Hume.

16 books were added during the month. Of these 10 were received by gift, 1 by purchase and 5 from the New Orleans Medical and Surgical Journal. A notation of titles of recent date is attached.

NEW BOOKS—MAY.

Surgeon-General's Office U. S. Army—Index Catalog, vol. 6.

American Surgical Association Transactions, vol. 44.

U. S. Public Health Reports, vol. 41, pt. 2.

American Medical Directory, 1927.

Ophthalmic Yearbook, 1926.

Corscaden—History Taking and Recording, 1926.

McGowan—Pernicious Anemia, Leucemia and Aplastic Anemia, 1927.

Karsner—Human Pathology, 1926.

Harris—Neuritis and Neuralgia, 1926.

Feingold—Catalog of Collection on Ophthalmology, 1926.

Schellberg—Colonic Therapy in Treatment of Disease, 1923.

Storey—Status of Hygiene Programs in Institutions of Higher Education, 1927.

H. THEODORE SIMON, M. D,.
Secretary.

CHIROPRACTIC.

By H. L. MENCKEN.

But the chiropractor, having no such investment in his training, can afford to work for more humane wages, and so he is getting more and more of the trade. Six weeks after he leaves his job at the filling station, or abandons the steering wheel of his motor truck, he knows all the anatomy and physiology that he will ever learn in this world. Six weeks more and he is an adept at all the half-nelsons and left hooks that constitute the essence of chiropractic therapy. Soon afterward, having taken post-graduate courses in advertising, salesmanship and polite conversation he is ready for practice.

* * *

As I have said, it eases and soothes me to see the chiropractic so prosperous, for it is his sublime function in the world to counter-act the evil work of the so-called science of public hygiene, which now seeks to make morons immortal. If a man, being ill of a pus appendix, resorts to a shaved and fumigated long-shoreman to have it disposed of, and submits willingly to a treatment involving balancing him on McBurney's spot and playing on his vertebrae as on a concertina, then I am willing for one, to believe that he is badly wanted in heaven. And if that same man, having achieved lawfully a lovely babe, hires a blacksmith to cure its diphtheria by pulling its neck, then I do not resist the divine will that there shall be one less radio fan in 1967.

* * *

What is needed is a scientific inquiry into the matter, under rigid test conditions, by a committee of men learned in the architecture and plumbing of the body, and of a high and incorruptible sagacity. Let a thousand patients be selected, let a gang of selected chiropractors examine their backbones and determine what is the matter with them, and then let these diagnoses be checked up by the exact methods of a scientific science. Then let the same chiropractors essay to cure the patients whose maladies have been determined. My guess is that their errors in diagnosis will run up to at least ninety per cent and that their failures in treatment will push ninety-nine per cent.

MALARIAL THERAPY IN GENERAL PARALYSIS OF THE INSANE.

In view of the hitherto almost hopeless prognosis in general paralysis of the insane the percentage of recovery (or remission) we have obtained seems to be complete justification for the use of malarial therapy. In addition, from a hospital point of view the treatment is certainly well worth while, as the patients become much more easily dealt with, and, in fact, if the only improvement to be found was in their habits (which almost invariably become clean) the advantages accuring therefrom would be sufficient to warrant the work.—Steel and Nicoll, Lancet, 1927, 1,484.

TREATMENT OF NEVI WITH RADIUM.

To the parents or the patient this condition is of the greatest importance. It is not a matter of life or death, but unsightly marks or scars can be the source of much embarrassment. Treatment undertaken lightly, resulting possibly in more scarring than is necessary, will be a life-long reminder to the physician that his experience or training was not sufficient for this work. Experience must be the guide in the choice and use of a therapeutic agent. I am convinced that the most thorough removal and the best cosmetic result can be obtained in the treatment of nevi by the use of radium.—Johnston, Z. A.: Radiology, 1927, 8, 292.

LOUISIANA STATE MEDICAL SOCIETY NEWS

H. Theodore Simon, M. D., Associate Editor.

FLOOD SANITATION.*

The problems of health and sanitation involved in the Mississippi Valley Flood are the greatest in the history of the country. These problems concern a million and a half people in seven states, covering an area of at least two hundred thousand square miles.

From the first week all agencies concerned in meeting these problems have fully recognized the size and the nature of the task and have taken every necessary step to adequately protect the half million refugees crowded in concentration camps, and other thousands living in box cars and second floors of flooded homes.

On April 28, 1927, the Red Cross National Medical Officer called the first flood health conference at Memphis to develop plans for the coordination of Red Cross medical and nursing services, the United States Public Health Service, the Army and Navy Medical Services, State Medical Societies and the American Medical Association with the services of the seven State Health Departments in the flood area.

The first important result of the conference was the definite recognition of the several State Health Officers as the officials in complete charge of all health and sanitation within their respective states and as the officials directly responsible for all such work. The second important result was the establishment of a central clearing house for all requests for personnel and materials and for all offers of service and materials. The conference voted unanimously to make the Red Cross Headquarters their clearing house, with Dr. W. R. Redden, National Medical Officer in charge.

Through these channels every State Health Officer has made known his needs, and not once in eight and one-half weeks has a single request been turned down.

The conference further recognized two definite phases in the emergency health and sanitation program: first, the refugee period during which thousands of people were suddenly driven out of their homes into camps and box cars, and second, or period of readjustment, measured from the time these people returned to their homes to the time when conditions of health and sanitation became comparable to those existing before the flood.

*Written by Dr. W. R. Redden, National Medical Officer of the American Red Cross.

Immediately plans were inaugurated to meet the needs of an effective program of health and sanitation. Already Surgeon General Cummings had assigned to the Red Cross Disaster Relief Headquarters as Liaison Officer one of the most outstanding Medical Officers of the Service, Senior Surgeon John McMullen, who took charge of the assignment of all personnel of the United States Public Health Service.

The next step was to measure the number of health specialists and sanitarians and the amount of biologics there was available from State, County and Municipal Health Departments outside of the flood area. Within forty-eight hours, in response to telegrams sent to fourteen or fifteen State Health Departments, we had listed seventy-five to eighty health officers, sanitarians, epidemiologists and chemists ready to give service with salaries paid by their respective states or counties, and expenses to be covered by the Red Cross.

Furthermore, it soon became evident that local county medical societies near or in the refugee camp communities had organized rotating visiting medical and dental services for the camp dispensaries and emergency hospitals. In addition to this, the health departments, assisted by the sanitary corps of the National Guards, established in each camp a sanitary service sufficient to guarantee safe water, safe milk, proper waste disposal, and clean food handling.

The fact that during eight and one-half weeks there has not been a single outbreak of disease or a single epidemic of any kind in the camps, that even the ordinary illnesses among the refugees have been far less than among a similar group under ordinary conditions, is the finest tribute to the splendid work of the doctors, sanitarians and nurses in these camps.

Already six weeks have passed since refugees have started to return to their homes, yet there has not been an outbreak of disease. Here again is a testimony to the exellent clean-up work done by the sixty health officers and sanitarians loaned by other states, to the thirty or forty United States Public Health Service experts loaned to the Health Departments of the flood states, and to the Health Officers themselves and their assistants. There is every indication that with the continuation of this work and the establshment of permanent local health measures the flooded areas may escape the ravages of the filth-borne diseases which invariably follow in the wake of floods.

The Red Cross, as the one volunteer agency chartered by Congress to give service in time of disaster and to institute measures for the prevention of epidemics, has already spent over two hundred thousand dollars in assisting State Health Departments to meet these unusual problems and has approved the expenditure of an additional three hundred thousand dollars to complete the work.

A glance at the kinds and quantities of personnel and materials will give some idea of the nature of this assistance. The Red Cross has furnished sixty Health Officers and Sanitarians at a cost of twenty-five thousand dollars, in addition to the hundreds of local physicians who have rendered volunteer service in camps. A total of one hundred and fifty Public Health nurses have given valuable service in camps and in the conduct of universal typhoid inoculations. Over one and one-quarter million pounds of hydrated lime and 40,000 pounds of unslaked lime, along with 40,000 cans of chloride of lime constitute the contribution of disinfectants for camps and villages. One hundred and thirty thousand gallons of crude oil, plus a donation of another 100,000 gallons, have been used to destroy carcasses of dead animals which have numbered about 60,000. To meet the need of mosquito control with the malaria hazard multiplied a thousand fold by the myriads of newly formed pools, ponds and puddles, the Red Cross has supplied 225,000 gallons of spraying oil and 191 spray cans, and considerable labor. To further combat malaria, it has instituted a program for screening fifteen thousand homes of malaria carriers under the careful direction of J. A. LePrince of the United States Public Health Service, one of the best known experts in the field of malaria control in the country and a former assistant to General Gorgas in his Panama sanitation work. This program includes the employment of thirty additional sanitary inspectors to assist in carrying out the details of sanitary operations.

Furthermore, it has already donated 275,000 mosquito bars to flood sufferers, and stands ready to furnish all that are needed to replace those lost or damaged by the flood.

Although there is a division of opinion among experts about the use of quinine as a prophylactic for malaria, the Red Cross has taken the stand that the use of quinine has a definite economic value, and has therefore furnished reasonable quantities to State Health departments. The extent of this service to date can be measured somewhat by the thirty million grains of quinine already sent out.

In Louisiana, Dr. Dowling has asked for large quantities of soft soap to be used in scouring out the filthy water-soaked homes—14,700 pounds are already in use, with plenty more to follow.

The campaign for universal immunization against typhoid has been considered the most effective measure to combat this disease. The campaign started in all refugee camps and completed up to 90 per cent, has been aggressively pushed to include all members of the communities as they return to their homes. With 536,000 complete immunizations on record, there should be no difficulty in reaching a grand total of 700,000 people with this protection. The task already constitutes the most important protective work ever accomplished outside of the great armies of the world in time of war. But this does not represent the only protective work, for at last 160,000 people have been vaccinated against smallpox during the refugee period, to say nothing of the other thousands of school children who are compelled by law to be vaccinated in some of the states.

Faced with the greatest problem of health and sanitation in the history of the country, the veteran health officers of the seven flooded states have conducted for eight and one-half weeks an effective program of prevention against malaria, typhoid fever, dysentery, and other filth-borne diseases. In this fight they have had the constant assistance of the co-ordinated services of the United States Public Health Service under the guidance of Dr. John McMullen; of the Red Cross Medical Service under Dr. W. R. Redden; of the Red Cross Nursing Service, under Miss Elizabeth G. Fox, director, and Miss I. Malinde Havey, assistant director of the Red Cross Public Health Nursing Service; of the Health Officers and Sanitarians of fifteen outside states; of the state and county medical societies, and the officers of the sanitary corps of the National Guard and the Army. With the continuation of this fight along established lines, we can predict ultimate success in the control of the diseases which have always followed in the wake of floods and other national calamities.

The following Chairmen of Scientific Sections for the meeting of the Louisiana State Medical Society, 1928, have accepted their appointment by the President:

Medicine and Therapeutics—Dr. J. H. Musser, New Orleans.

Pediatrics—Dr. L. R. DeBuys, New Orleans.

Nervous and Mental Diseases—Dr. R. H. Bryant, Pineville.

Bacteriology and Pathology—Dr. W. H. Harris, New Orleans.

Public Health and Sanitation—Dr. Fred J. Mayer, Opelousas.

Gastro-Enterology—Dr. D. N. Silverman, New Orleans.

General Surgery—Dr. Louis Abramson, Shreveport.

Gynecology and Obstetrics—Dr. W. B. Chamberlain, Baton Rouge.

Eye, Ear, Nose and Throat—Dr. F. C. Bennett, Monroe.

Urology—Dr. H. W. E. Walther, New Orleans.

Radiology—Dr. W. R. Harwell, Shreveport.

Orthopedic Surgery—Dr. Guy A. Caldwell, Shreveport.

Those desirous of reading papers should communicate with the various Chairmen as promptly as possible.

The following resolutions were adopted unanimously at a meeting of the Surgical Staff of the Charity Hospital, held May 18th, 1927:

WHEREAS, on May 7th, 1927, Frederick William Parham, a member of the Surgical Staff of the Charity Hospital, was removed by death;

BE IT RESOLVED; that we, the members of the Surgical Staff of the Charity Hospital assembled, do fully appreciate his valuable services to the Institution and the loss sustained by his death. For fifty years he was one of the most active members of its Staff; a leader of its reform movements, as well as in its surgical progress. It was through his efforts that the great scourge of puerperal infection was finally wiped out. In 1890 he introduced aseptic surgery into the Institution. To accomplish this he bought the first sterilizer used in the hospital and prepared his own instruments and materials. This marked a new epoch in the history of this great hospital. Although these two achievements stand out probably the most conspicuous, there was not a day that he was not striving for the betterment of the patients, the advance of surgery and the welfare of this hospital.

BE IT FURTHER RESOLVED; that we extend to his family and friends our sympathy, feeling that they have the consolation of knowing there were few men in his profession who have enjoyed a better and more deserving reputation.

(Signed) JOS. HUME,
Chairman,
P. GRAFFAGNINO,
Vice-Chairman.
E. L. KING,
Secretary.

IBERVILLE PARISH MEDICAL SOCIETY.

At a meeting of the Iberville Parish Medical Society, held April 5th, 1927, at Plaquemine, La., the following officers were elected:

Dr. W. E. Barker, Jr., Plaquemine, La., President.

Dr. Eugene Holloway, Plaquemine, La., Vice-President.

Dr. Guy A. Darcantel, White Castle, La., Secretary-Treasurer.

Dr. E. L. King was elected to a fellowship in the American Gynecological Society in May, 1927.

MINUTES OF THE MAY MEETING OF THE NORTH LOUISIANA SANITARIUM STAFF.

The regular monthly meeting of the North Louisiana Staff was held on Tuesday, May 24th, 1927. There were twenty doctors present, and following dinner served by the Sanitarium, the Clinical program was taken up.

Dr. Herold, president of the Louisiana State Medical Society, gave an interesting report of the proceedings of the recent meeting of the State Medical Society and of his trip to the tropics.

Drs. Abramson and Scales presented a patient on whom they had done a plastic operation for a bilateral ectropion following a severe burn of the eyelid and forehead.

Led by Drs. Crain and Abramson, the Staff discussed surgery of the gall bladder, particularly anastomosis of the gall bladder to the stomach or duodenum. Reports of cases recently operated on in the Sanitarium were given, and thus far results have been most satisfactory.

Dr. Rigby reported the use, most successfully, of bismuth potassium tartrate in the treatment of Vincent's Angina.

The regular monthly Staff Meeting of our Lady of The Lake Sanitarium was held at that institution May 25th. There was about a 50 per cent attendance.

The following case records were taken up and freely discussed.

Dr. Eidson, Case No. 6270, Stab Wound of Upper Abdomen with Protrusion of Omentum, Surg. Inspection, Recovery.

Dr. C. A. Lorio, Case No. 6377, An accident case in which the patient presented a Compound Comminuted Fracture of the Leg complicated by symptoms of shock and hemorrhage. The loss of blood not having come from the leg but the patient's condition being so bad, no exploration of the abdominal cavity was made, and patient gradually recovered.

Dr. Chamberlin, Case No. 6098, Ruptured Appendix, with general dissemination of infection

throughout entire abdominal cavity. Gradual improvement with subsequent sloughing of abdominal muscles and fascia around wound allowing the intestines to prolapse into wound. By daily replacement, covering intestines with rubber dam, and held in with gauze and pressure bandage, wound slowly healed by granulation covering up the intestines entirely. This was followed by an hepatic abscess which was drained and patient made a good recovery.

Dr. Jeff McHugh reported an interesting case of fetal monster, in which the heart and part of the small intestines were extra-costal and extra-abdominal without any herniation. This was a preliminary report, the doctor intending to present the specimen along with pathologist's report at future meeting.

SEMI-ANNUAL EXAMINATION OF NURSES.

The semi-annual examination of the Louisiana Nurses' Board of Examiners was held in New Orleans and in Shreveport, May 2d and 3d, 1927.

The successful applicants are:

Inez Mary Achee, Roberta Edna Ainsworth, Dorothy Annie Alexander, Alida Mary Amedee, Marie Helen Arceneaux, Georgiana Marie Barrilleaux, Frances Louise Beckham, Mary Leola Blardone, Pearl Mathews Bookmiller, Miriam Bowman, Margaret Elizabeth Carr, Lollie Cotten, Currow, Edith Lenore De Vilbiss, Estelina Marie Diaz, Eunice Mable Dyess, Leonise Earle, Refugio Elvir, Montana Engbarth, Mary Madalen Fontana, Laura Mae Fortenberry, Mary Kathryn McNamara Gillin, Mabel Victoria Hanna, Mary Alice Harwell, Rosa Belle Hickman, Mildred Elizabeth Hunt, Ila Celestine Hyde, Lucia Reynolds Jones, Lillian Beatrice Kelley, Julie Marie Landry, Maude Schilling Landry, Irene Larza, Rita Margaret Legendre, Susie Lowery, Cecilia Finley McDevitt, Dora Margolin, Elizabeth Martin, Margott Mayer, Marie Lynda Miller, Lois Lucille Morgan, Carrie May Mullins, Alma Marie Oubre, Helena Petersen, Alice Mary Sass, Mary Lee Slocumb, Jessie Maude Smith, Sister Sylvester Henkel, Zoe Marie Theriot, Marie Antoinette Toups, Doris Valentine Vernon, Jeanette Elizabeth Wallace, Claire Thelma Wambsgans, Mary Edna Williams, Ouida Evelyn Williams, Ellen Trent Wilson, Henry Nelle Wise.

Gertrude Arant, Myrtle Florence Bass, Thelma Irene Russell Brun, Hazel Eleanor Chapin, Mattie Elizabeth Crump, Ruth Duett Boyett Fort, Zera M. Hewitt, Adelaide Robert Kelley, Louise Poland, Hazel Christine Skeeles, Marie Stewart, Mary C. Stuckey, Thelma Sturdivant, Gladys Greye McGhee Bickham, May Breithaupt, Mamie Jackson De Shazo, Grace Belle Fletcher James, Carrie Jackson Kyle, Thelma Scott, Mrs. Frank M. Lampkin, Maude Agnes Walther, Lucy Branch, Bertha Miller, Zula Emma Smith, Nettie Olivia Leteff, Mary Elizabeth Robertson, Theodora Robertson, Linda Johnson, Edna Ruth Black Coycault, Barbara Cathrine White Cronan, Emily Marrie Talbot, Beatrice Evelyn Mayer, Margaret Peterkin Ward.

Leah Baumy, Stella Elizabeth Clarke, Lillian Belle Flynt, Mathilde Irene Gautreaux, Ellen Gough, Doris Lang, Julia Euphrasia Lapeyrouse, Dorothy Veronica Martin, Lottie Belle Underwood, Cleo Watson, Blanche Marie Crain, Florence Eugenia Hamner, Leola Huckabay, Lou Ellen Hutcherson, Jeanne Jenkins, Clara Belva Moore, Bessie Adeline Stuckey, Gussie Nadine Stuckey, Mary Mason Stewart.

Colored applicants: Morlein Florence Bates, Lucile Alexenia Mitchell, Allie Mae Penn, Ercell Carmel Young.

The American Board of Otolaryngology conducted an examination at Washington, D. C., on May 16 and 17, and at Spokane, Washington, on June 4. Of the 142 men examined at Washington, D. C., 119 were passed and 23 failed to pass the examination. In Spokane, the number passed was 46, and the number failed was 6.

The next examination will be held in Detroit on September 12, 1927. The applications for examination should be sent to Dr. H. W. Loeb, Secretary, 1402 Grand Boulevard, St. Louis, Missouri.

UNITED STATES CIVIL SERVICE EXAMINATION—MEDICAL OFFICER (SPECIALIST IN PATHOLOGY).

The United States Veterans' Bureau Hospital at Knoxville, Iowa, is in need of a specialist in pathology. Applications for the examination for this position are now being received by the United States Civil Service Commission under its general announcement for medical officers.

Full information regarding requirements for entrance to the examination is given in examination announcement No. 43 which, together with application form 2600, may be obtained from the United States Civil Service Commission, Washington, D. C., the secretary of the United States Civil Service Board, Customhouse, New Orleans, La., or St. Louis, Mo.

ASSISTANT MEDICAL OFFICER, ASSOCIATE MEDICAL OFFICER, MEDICAL OFFICER, SENIOR MEDICAL OFFICER.

Applications for these positions will be rated as received at Washington, D. C., until December 30.

The examinations are to fill vacancies occurring in the Indian Service, the Public Health Service, the Coast and Goedetic Survey, Panama Canal, the Veterans' Bureau Field Servcie, and other branches of the Federal classified service throughout the United States.

Specialists are needed in practically all branches of medicine and surgery. There is especial need for medical officers qualified in tuberculosis or neuropsychiatry.

Competitors will not be required to report for examination at any place, but will be rated on their education, training and experience.

Full information may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the board of U. S. civil service examiners at the post office or customhouse in any city.

NOTICE OF EXAMINATION FOR ENTRANCE INTO THE REGULAR CORPS OF THE U. S. PUBLIC HEALTH SERVICE.

Examinations of candidates for entrance into the Regular Corps of the U. S. Public Health Service will be held at the following named places on the dates specified:

At Washington, D. C., Aug. 8, 1927; at Chicago, Ill., Aug. 8, 1927; at New Orleans, La., Aug. 8, 1927; at San Francisco, Cal., Aug. 8, 1927.

Candidates must be not less than twenty-three nor more than thirty-two years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written, and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President, with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon General, U. S. Public Health Service, Washington, D. C.

DIED: Florena Gates Rich, New Orleans; Tulane University of Louisiana School of Medicine, New Orleans, 1925; on the staff of Charity Hospital; aged 29; died May 12, at the Touro Infirmary of acute leukemia and pericarditis.

IMPORTANCE OF DENTAL SERVICE FOR THE NEGRO GROUP.

Every negro having a communicable disease is a menace to the health of all with whom he may be associated, and particularly to the well-being of those he may serve personally and intimately. Dental and oral maladies, which commonly injure health by interfering with nutrition or occasioning general disorders, also lower resistance to numerous communicable diseases. The average negro and his children, under prevailing conditions in North America, are almost if not wholly as susceptible to dental disorders as the average white person. In 1925 there were about 1300 colored dentists in the United States, a ratio of 1:8500 of negro population. Most of these practitioners live in the larger cities.—Carnegie Foundation for the Advancement of Teaching, Bulletin No. 19, June 27, 1927, p. 88.

METHODS OF COMBATING MALARIA.

The methods of combating malaria are all based upon the idea of breaking the circuit between the person with malaria germs in his blood, the infected and infecting mosquito, and the non-malarial individual. Fortunately quinine properly and persistently taken will usually cure the carrier. Efficient screening of houses offers a good deal of protection. Strategically placed pigsties and horse-or cow-barns will deflect a great many anophelines from nearby houses. But valuable as these methods are and indispensable as quinine is in the early stages of control, the surest protection lies in preventing the breeding of anophelines.

For this several plans have been tried. Minnows placed in stockponds, pools, and lakes will eat the larvae or "wigglers." A film of oil on the surface of water will kill them. Drainage on a large scale often rids a whole area of the disease. Minor ditching insures the rapid flowing of surface water and removes the danger from stagnant pools. The filling of low marshy ground is also useful.

Of late the dusting of breeding-places with a powder composed of one part of Paris green (known in Europe as Schweinfurth green) and 100 parts of sifted road dust has proved simple, cheap, and remarkably effective. Originating with the United States Public Health Service, this plan has been tried in Europe with the aid of the Foundation. In Italy a semi-official station for combating malaria was helped to test the method, at first in two towns in Calabria and Sardinia, and later during 1926 in seven other places. The results are gratifying and seem to show that the control of mosquito breeding is of fundamental importance in malaria prevention.

MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

J. S. Ullman, M. D., Associate Editor.

TRANSACTIONS OF THE HOUSE OF DELEGATES, 1927.

The twenty-fourth annual session of the House of Delegates of the Mississippi State Medical Association met in the assembly hall of the Edwards House, Jackson, May 10, 1927, President T. E. Ross of Hattiesburg in the chair. Roll call showed thirty-five members present. President Ross stated that the flood conditions north of Vicksburg, and the consequent crowded conditions in Vicksburg, necessitated the Council changing the meeting from Vicksburg to Jackson.

E. F. Howard, Vicksburg, was elected a member of the Committee on Budget and Finance to succeed S. W. Johnston whose term had expired. The Secretary read the following report:

"*To the House of Delegates, Jackson, Mississippi.*

Gentlemen: Most of you are thoroughly familiar with the reasons that caused the Council to change the meeting place of the Association from Vicksburg to Jackson. This change is unfortunate but the conditions necessitating the change were still more unfortunate.

A year ago the House of Delegates requested the Council to plan a redistricting of the state into councilor districts. The Council held at least one meeting but no very definite action was taken. This matter should be finally disposed of. There are several societies running on a temporary basis pending changes in the districts.

Our membership is larger by exactly one hundred than at this time last year. This is gratifying. Sincerely yours,

May 10, 1927 T. M. DYE, Secretary."

Treasurer Buchanan read his financial report which was automatically referred to the Committee on Budget and Finance. (See Exhibit B.) For the Secretary's financial report, see Exhibit A.

At this point a recess of five minutes was had to allow the Councilor Districts to select members of the Nominating Committee, the selections resulting as follows:

First District—J. W. Lucas, Moorhead.
Second District—P. W. Rowland, Oxford.
Third District—W. H. Anderson, Booneville.
Fourth District—J. O. Ringold, Vaiden.
Fifth District—Henry Boswell, Sanatorium.
Sixth District—I. W. Cooper, Meridian.
Seventh District—O. A. Lomax, Waynesboro.
Eighth District—W. H. Frizell, Brookhaven.
Ninth District—C. A. McWilliams, Gulfport.

Under the head of Unfinished Business, E. F. Howard brought up the matter of lye legislation and the following committee was appointed to draft suitable legislation: E. F. Howard, Chairman, Vicksburg; R. M. Adams, Ripley; George Baskervill, Greenwood. (To this committee later were added G. K. Adkins, Jackson and E. L. Posey, Jackson.)

Under New Business, J. M. Buchanan moved that the Association appropriate $2,000.00 from the General Fund for the relief of flood sufferers, which was carried.

D. W. Jones moved that the Chair appoint a committee of three to attend the Rehabilitation Conference now in session in Jackson. This motion was carried and President Ross appointed D. W. Jones, E. F. Howard and H. F. Garrison. T. M. Dye moved that this committee be empowered to proffer the Conference a loan of one thousand dollars from the Medico-Legal Fund, which was carried.

E. F. Howard brought to the attention of the House the urgent needs of a certain physician in the flooded area, whereupon a substantial free-will offering was made among those present. S. S. Caruthers moved that the Chair appoint a committee of three to investigate the condition of physicians in the flooded territory. Carried.

I. W. Cooper moved to reconsider the motion appropriating two thousand dollars for relief, upon the ground that the motion should specify more specifically how this money was to be used. W. H. Frizell moved to table a reconsideration until Wednesday's session. Both motions prevailed.

D. J. Williams offered the following amendment to the By-Laws:

"Amend Chapter X, Section 1, to read 'one dollar' instead of 'twenty-five cents.'" Whereupon the House adjourned to meet at 8 o'clock Wednesday morning.

The House reconvened at 8:30 o'clock Wednesday morning, May 11, 1927, President Ross presiding. Roll call showed thirty-two present. The amendment to the By-Laws offered by D. J. Williams was called up and carried.

The motion to reconsider the appropriation of $2,000.00 was brought up by W. H. Frizell moving that the Chair appoint a committee of one to disburse this two thousand dollars as he saw fit. At this point Mrs. D. J. Williams was invited to explain the urgent need of mothers and young

babies in camps, whereupon S. W. Johnston moved to turn over one thousand of the appropriation to the Woman's Auxiliary for these needs, which amendment was accepted by W. H. Frizell and his second. S. E. Eason moved to use the remaining thousand dollars among needy physicians in the flooded area. Carried by a rising vote. The original motion as amended was carried, the Chair appointing E. F. Howard a committee of one to disburse the money appropriated for the relief of physicians in the flood area of the Delta.

Past-President G. S. Bryan appeared in the House at this time and received a cordial welcome, the House rising as a whole. A few brief words by Dr. Bryan expressed his thanks and appreciation for this expression of love.

A motion by T. M. Dye to adjourn the House until after the adjournment of the General Session on Thursday was carried.

The House of Delegates met at 3:30 p. m., Thursday, May 12, following the final adjournment of the General Session, T. E. Ross, President, presiding. Roll call showed twenty-six members present.

The Committee on Public Policy and Legislation made a verbal report through I. W. Cooper. The Secretary read the following report of the Committee on Necrology:

"As Chairman of the Committee on Necrology, I beg leave to submit the following report: During the past year God in His infinite wisdom has called to their reward twelve of the most loyal and faithful and distinguished members of this Association. Since last we met the following members have died:

Theodore Borroum, Corinth.
F. T. Carmack, Iuka.
H. F. Crook, Jackson.
J. D. Donald, Hattiesburg.
H. G. Fridge, Denco.
I. G. Kecham, Wanasoga.
T. K. Magee, Fernwood.
W. E. Sharp, Pascagoula.
B. A. Sheppard, Lexington.
Nolan Stewart, Jackson.
G. S. Turner, Hattiesburg.
D. C. Warren, Union Church.

C. D. MITCHELL, Chairman."

W. H. Anderson for the Committee on Hospitals made the following report, which was referred to the Committee on Public Policy and Legislation:

COMMITTEE ON HOSPITALS.

"Mississippi has five State owned hospitals, namely, Charity Hospital, Jackson; Charity Hospital, Vicksburg; Charity Hospital, Natchez; South Mississippi Charity Hospital of Laurel, and Mattye Hersee Hospital, Meridian. The appropriation for these five hospitals for 1926 and 1927 is $514,431.77. The Legislature made appropriation to twenty-three hospitals dispersed over the State for 1926 and 1927. The least amount being $2,000.00, the largest $20,000.00. Amounting to $118,600.00.

In the United States the average is one licensed doctor to about seven hundred and fifty people; in Mississippi one registered physician to about thirteen hundred people. In the cities with State owned Charity Hospitals, one doctor to about five hundred and fifty population. Some rural sections having only one licensed physician to more than two thousand population.

Many patients must be treated in the hospital if they are to have the best in modern medicine, and the treatment must be administered within twenty-four to forty-eight hours if the life of the patient is to be saved. This is an era of preventive medicine and preventive medicine should be practiced by the same physician who practices curative medicine. The small town and rural district do not have as many physicians as they need.

The community hospital is the only hope to solve our rural medical problems. It will encourage cooperative medicine, encourage physicians and surgeons, nurses and dentists to remain in the small town. It will enable 75 per cent or 80 per cent of surgical and medical treatments to be administered at homes where patients are now forced to go to the city. It will enable much of it to be done at an earlier date with probably better end results and will save a lot of expense in time, railroad fare and hotel bills.

Therefore, we would suggest that our Committee on Legislation memorialize our Legislature that, in view of the fact that so many hospitals are calling for aid for charity, that they be checked very closely to determine whether or not people are being admitted who do not deserve free treatment, even in part.

(2) And that the Legislature be advised against the construction of any more large Charity Hospitals.

(3) To encourage the building of community hospitals over the State, at least to the extent of helping the people organize and operate community owned hospitals, advising the kind of construction and appropriate funds sufficient to take care of the actual charity need of the community.

Committee. By W. H. ANDERSON."

The Committee on Budget and Finance made the following report:

BUDGET AND FINANCE COMMITTEE.

"We suggest the following budget for the year:

Reportorial	$250.00
Council	100.00
Secretary (salary and expenses)	600.00
N. O. Journal	1,000.00
Transactions	100.00
President's Expenses	100.00
Incidentals	50.00
Total	$2,200.00"

Geo. E. Adkins made a minority report for the Committee on Budget and Finance as follows:

"In regard to that part of the Councilors' reports referring to expenses incident to attending the called meeting of the Council on Oct. 23, 1926, I wish to file a minority report of the Budget and Finance Committee, recommending that the accounts be paid as submitted.

I am of the opinion that hotel bills and meals on a trip like this can be properly classed under the head of 'traveling expenses' (Chapter VIII, Section 2, By-Laws)."

The Budget and Finance Committee had deleted several items of expense submitted by various councilors in attendance upon a called meeting of the Council at which the redistricting of the state was discussed. This minority report was for the purpose of again including these items for payment. The minority report was adopted by the House by a unanimous vote, on motion of Henry Boswell.

The Secretary read the following from the Woman's Auxiliary:

WOMAN'S AUXILIARY.

"We, the members of the Woman's Auxiliary to the Mississippi State Medical Association, wish to express to the Medical Association our sincere appreciation of the confidence placed in us, in the giving of $1,000 to be used by the Auxiliary for flood relief.

We also thank you for your courtesy and kindness in helping us so much to make our fourth annual convention a pleasant and successful one.

MRS. W. H. FRIZELL, Pres.
MRS. HENRY BOSWELL, Rec. Secty."

"To the House of Delegates of the Mississippi State Medical Association:

The Woman's Auxiliary to the Mississippi State Medical Association is organized and working to co-operate with the physicians in extending the aims of the profession. It is the desire of the Auxiliary to be useful in an intelligent and helpful way to the Medical Association. But we reallize that "if we are to be effective in this work of educating the public in health matters, we must first educate ourselves." Therefore, we submit to you for your approval and subject to your revision, the following plan of work, as worked out by the Committee on Education and Publicity:

First. To work for full time county health departments, through local organizations.

Second. To study State health laws, and work for their enforcement, especially for control of rabies in dogs.

Third. To study and work for control of communicable diseases, under the direction of the State Health Department.

Fourth. To have "Hygeia" in every public school and library.

Fifth. To furnish clothing for flood relief work through the central chairman of this work, and to continue this through the rehabilitation period.

Sixth. To stand ready at all times as an organization to answer any call from the Medical Association.

Signed,

MRS. W. H. FRIZELL, President
MRS. HENRY BOSWELL, Rec. Secty."

I. W. Cooper, D. J. Williams and T. M. Dye were appointed a committee to reply to the communication from the Woman's Auxiliary.

The Council through its Secretary, D. W. Jones, made its report, which was adopted.

REPORT OF THE COUNCIL.

1927 Meeting.

"To the House of Delegates Mississippi State Medical Association:

The Council begs to submit the following report of its activities since the last meeting of the Association:

1. Medical Organization. At the 1926 meeting of the Association, a resolution was introduced in the House of Delegates calling for a redistricting of the State into Councilor Districts. This resolution was referred to the Council with a request that it present a plan at the 1927 meeting of the Association. Pursuant to that instruction, Chairman Williams called a meeting of the Council for Oct. 22, 1926, at noon, at the Edwards House. All the Councilors were present at this meeting except Holmes and Robertson. Dr. T. E. Ross, President of the Association, was present by invitation.

After considerable discussion, it was decided that it would not be best to make any extensive changes in the present plan of districting, but that the Council would devote the time chiefly to a discussion of the present arrangement with a view of making such modifications as might seem best to perfect the functioning of the local societies as they now exist.

Certain tentative changes were proposed, subject to approval by the local societies affected, and the several councilors instructed to put them into effect and be ready with a report at the 1927 meeting of the Association.

Another meeting of the Council was called by Chairman Williams for Monday night, 7 P. M., at the Edwards House, just preceding the meeting of the Association. All the Councilors were present at this meeting, and President Ross and Secretary Dye, by invitation.

The working out of the tentative programs was discussed, and the net results of the changes finally made are hereby reported as follows:

District No. 1—The nine counties in this district are comprised in two societies, the Clarksdale and the Delta. They have semi-annual meetings and are growing and doing good work. No changes.

District No. 2—This consists of the North Misssissippi Medical, the DeSoto, the Panola, and the Tate county societies. They are holding regular meetings and doing good work. No changes.

District No. 3—All the counties in this district are in one society, the Northeast Mississippi. They report a membership of about two hundred, hold four meetings a year, good programs, no discord. A suggestion whereby Calhoun would have been transferred into the Second District, and another whereby Noxubee would have been transferred into the Sixth, was not agreeable to them, and it was dropped.

District No. 4—This consists of the Winona District Society, the Attala County, the Holmes County, with Calhoun County unorganized. No changes as to district, but Councilor Holmes urged to get some organization in Calhoun, or place that county in one of the larger societies.

District No. 5—It was recommended that Issaquena, Sharkey and Claiborne merge into the Warren County society. Issaquena and Sharkey accepted the recommendation, and are working well in the new arrangement, to the satisfaction of all concerned. Claiborne County prefers to retain her position as the sphinx of the Association. "They won't pick cotton and they won't run away, And they won't do nothing the white folks say."

District No. 6—A new society comprising the counties of Lauderdale, Newton, Neshoba, and Winston, has been organized under the name East Mississippi Medical Society. The Council recommends that Kemper, Leake, and Scott go into this society. If certain members in these counties find it more convenient to affiliate with other societies, let them proceed according to the regulations, getting permission for transfer from their Councilor's district.

District No. 7—This is composed of two local societies, the Clarke-Wayne, and the South Mississippi. The latter comprises the counties of Covington, Forrest, George, Green, Jasper, Jones, Lamar, Marion, Pearl River, Perry, Smith and Jeff Davis. They are doing excellent work.

District No. 8—There are two societies in this district, the Tri-County, and the Homochitto Valley. There are about fifty members in each of these societies, and the Councilor reports satisfactory work. The Council recommends to the House that Lawrence County be placed in the Eighth District, with the Tri-County. If some of the members in this county find it more convenient to attend other societies, let them get transfers according to the regulations.

District No. 9—There are three local societies in this district, the Harrison-Stone, the Hancock, the Jackson County societies. Marion, Lamar, Pearl River and Perry have been transferred to the Seventh District. This arrangement is satisfactory to everybody concerned and they are doing good work.

We recommend that charters be issued to the Warren-Issaquena-Sharkey Society, the East Mississippi, the South Mississippi, the Northeast Mississippi, the Central, the Tri-County; and that all local societies not now in possession of proper charters proceed at once to get them.

The Council further orders that hereafter all membership transfers must be made according to the By-Laws; and local Secretaries are warned not to accept members outside of their jurisdiction unless properly transferred.

The Council has done its best to perfect the organizations and to build up the local societies, and respectfully submits this as its report under the instructions of the House.

D. J. WILLIAMS, Chairman.
D. W. JONES, Secretary."

.I W. Cooper placed Meridian in nomination for the 1928 meeting of the Association. On motion nominations were closed and Meridian unanimously selected.

W. H. Frizell made the following report for the Nominating Committee:

REPORT OF NOMINATING COMMITTEE.

To the House of Delegates, State Medical Association:

We, your Nominating Committee, after due deliberation and consultation with members of this Association, present the following nominations for your consideration:

For President—Dr. Jno. Darrington, of Yazoo City; Dr. M. L. Flynt, of D'Lo; Dr. C. M. Murray, of Ripley.

For Vice-President—Dr. E. Benoist, Natchez; Dr. E. S. Bramlette, Oxford; Dr. E. L. Posey, Jackson.

For Councilor Sixth District—Dr. W. G. Gill, Newton.

For Councilor Seventh District—Dr. E. M. Gavin, Richton.

For Board of Health—Dr. S. E. Eason, Union County; Dr. A. L. Emerson, DeSoto County.

For Board of Health, Second District—Dr. B. S. Guyton, Lafayette County.

For Board of Health Fourth District—Dr. George Brown, Yalobusha County; Dr. J. B. Shaw, Calhoun County; Dr. T. W. Holmes, Montgomery County.

For Board of Health Fifth District—Dr. Dudley Stennis, Newton County; Dr. C. T. Bell, Kemper County; Dr. H. S. Gully, Lauderdale County.

Delegate to A. M. A. (Two Years)—Dr. T. E. Ross, Sr., Forrest County.

Fraternal Delegate to Alabama—Dr. I. W. Cooper, Meridian.

Fraternal Delegate to Arkansas—Dr. D. C. Montgomery, Greenville.

Fraternal Delegate to Louisiana—Dr. W. H. Frizell, Brookhaven.

Fraternal Delegate to Tennessee—Dr. W. H. Anderson, Tupelo.

Respectfully submitted,

The Nominating Committee.
I. W. COOPER.
W. H. FRIZELL, Secretary.

I. W. Cooper asked to be allowed to withdraw the name of C. M. Murray. M. L. Flynt asked to be allowed to withdraw his own name. On motion the Secretary cast the vote of the House for John Darrington for President and he was declared elected. E. L. Wilkins moved that the Secretary cast the vote of the House for the remaining nominees, which was done. The House adjourned to meet at eight o'clock Tuesday morning, May 8, 1928, at Meridian.

Signed:

T. M. DYE, Secretary.

MINUTES WOMAN'S AUXILIARY.

The Fourth Annual Convention of the Woman's Auxiliary to the Mississippi State Medical Association was called to order by the President, Mrs. Sydney Johnston, of Vicksburg, at 10 o'clock A. M., May 11, 1927, in the Edwards House, Jackson, Mississippi. Twenty-two members were present, a good attendance in the face of conditions. The flood situation made it necessary to change the meeting place from Vicksburg to Jackson, to cut the session to one day's time, and to eliminate all social activities.

The invocation was given by Mrs. Henry Boswell, of Jackson and Sanatorium. A charming informal welcome was extended the convention by Mrs. E. L. Posey, of Jackson, and was beautifully responded to by Mrs. Clark for Mrs. I. C. Know, of Vicksburg.

The President expressed for herself and Vicksburg keen regret that their plans for entertaining the convention had to be abandoned on account of the refugee work in the camps at Vicksburg.

Minutes of the last annual meeting were read, corrected and adopted.

Mrs. S. E. Dunlap, Treasurer, gave a concise and encouraging report, which was adopted.

Mrs. D. J. Williams, of Gulfport, who had previously been appointed by the President as chairman of Flood Relief Work, was called upon to make a report. She announced that the Medical Association had that morning voted to contribute $1,000 to be used by the Auxiliary in Flood Relief Work. She reported that she had, in company with the President, made a survey of the refugee camps at Vicksburg and found the need urgent for underclothing for women and layettes for babies. A motion was made, seconded and carried, that the Auxiliary co-operate with the chairman of Flood Relief Work in supplying immediate needs and for rehabilitation work as long as necessary.

Motion was made, seconded and carried, that thanks be extended the Medical Association both for their vote of confidence in the expenditure of the $1,000 donated and for their courtesy and help in making the convention successful.

The report of the Committee on Education and Publicity, of which Mrs. M. H. Bell, of Vicksburg, is chairman, was read and adopted. This report

stressed the following aims to be worked for in the State Auxiliary:

(1) To work for full time county health departments through local organizations.

(2) To encourage birth registration.

(3) To study State Health laws and work for their enforcement.

(4) To work for control of communicable diseases, especially rabies in dogs and tuberculosis.

(5) To place Hygeia in every public school and library.

(6) To work for health promotion through prenatal care, school and mental hygiene.

(7) To aid in Flood Relief work as long as needed.

Business was suspended to introduce Dr. T. E. Ross, of Hattiesburg, who gave some encouraging and helpful suggestions.

Acting upon his suggestion a plan of work, embodying the aims and purposes of the Auxiliary, was drawn up by the Secretary to be presented by Dr. Ross to the House of Delegates of the Medical Association.

Among the reports from the nine Councilors' Districts, that of Mrs. T. G. Hughes, Clarksdale, First District, was especially good. This district made a spendid response to the call for flood relief.

Mrs. W. H. Frizell, President-Elect, Brookhaven, gave a report of work in her district that was very encouraging. The Auxiliary there is organized on the pattern of the Medical Society and meets at the same time, four times a year.

The report from the Harrison-Stone Auxiliary, of which Dr. Emma Gay is president, was read by Mrs. Williams. This Auxiliary has done a marvelous work both locally and for flood relief.

The report from Issaquena-Sharkey-Warren was read by Mrs. Clark, Secretary to the Auxiliary, and showed fine work and co-operation.

The following amendments to the Constitution and By-Laws were voted upon and adopted:

Article IV. Officers.—The officers of this Auxiliary shall be a President, President-Elect, two Vice-Presidents, a Recording Secretary, a Treasurer and Parliamentarian.

Article V. Executive Board.—These officers, together with the Councilors, and the Past Presidents, shall constitute an Executive Board to conduct the business of the Auxiliary.

Article VI. Section (b).—Nominating Committee shall be composed of five (instead of seven) members.

Article IX. Dues.—Each county Auxiliary shall pay dues to the State Auxiliary at the rate of twenty-five cents per capita, on or before October the fifteenth.

Each Auxiliary shall also pay dues of $1.00 for each society to the Southern Medical Auxiliary.

The President's address at this point gave a clear resume of the year's work and defined the aims of the organization. The retiring President, Mrs. Sydney Johnston, was given a rising vote of thanks and appreciation for her skillful, tactful, unselfish and wise administration.

The Nomination Committee, Mrs. Clark chairman, presented the following names for the state officers:

President—Mrs. W. H. Frizell, Brookhaven.

President-elect—Mrs. H. F. Garrison, Jackson.

1st Vice-President—Mrs. S. E. Dunlap, Wiggins.

2nd Vice-President—Mrs. T. E. Ross, Hattiesburg.

Recording Secretary — Mrs. Henry Boswell, Sanatorium.

Treasurer—Mrs. E. M. Gavin, Richton.

Parliamentarian—Mrs. D. J. Williams, Gulfport.

There being no further nominations, these officers were duly elected. Mrs. L. A. Barnett was re-elected Councilor for the Second District, and Mrs. J. M. Acker was re-elected for the Third District for terms of five years.

The retiring President, Mrs. S. W. Johnston, presented the newly elected President, Mrs. W. H. Frizell, in a charming manner. Mrs. Frizell was enthusiastically received and was cheered on presentation of her program for the prospective year's work.

The meeting was adjourned after calling a meeting of the Executive Board for 2:30 P. M.

The Executive Board in session at 2:30 P. M. elected Mrs. S. E. Dunlap, 1st Vice-President, to serve as organization chairman for the ensuing year.

Dr. F. J. Underwood, on being presented by Mrs. Frizell, the President, outlined a definite plan by which the Auxiliary may co-operate to advantage with the Public Health Department. He emphasized work for full time health departments, for child hygiene activities, and for immunization of dogs against rabies.

The meeting adjourned until next year at Meridian.

MRS. W. H. FRIZELL, Prest.
MRS. HENRY BOSWELL, Sec'y.

EXHIBIT A.

SECRETARY'S FINANCIAL REPORT.

RECEIPTS, 1926.

(May 8 to December 31, 1926)

May	8—Balance in Bank	$2946.28	
Dec.	31—95 Dues	285.00	
	Total		$3231.28

DISBURSEMENTS, 1926.

(May 8 to December 21, 1926)

May	13—Registrar	$ 12.50	
	15—President Bryan	100.00	
	15—Councilor Jones	11.50	
	15—Councilor Williams	24.52	
	15—Councilor Gavin	4.00	
	15—Councilor Lucas	16.55	
	15—Councilor Frizell	7.75	
	15—Councilor Robertson	46.61	
	15—Councilor Holmes	9.40	
	28—Reporter	226.90	
June	18—A. M. A.	6.75	
	25—Treasurer	1800.00	
July	6—Printing	24.00	
	6—Treasurer Buchanan	12.00	
Dec.	29—Printing	5.75	
	31—Postage	10.00	
	31—Secretary	500.00	
	Total		$2840.71
Dec.	31—Balance in Bank		390.47

RECEIPTS, 1927.

(January 1 to May 6, 1927)

Jan.	1—Balance in Bank	$ 390.47	
May	6—967 Dues	2901.00	
	Total		$3291.47

DISBURSEMENTS, 1927.

(January 1 to May 6, 1927)

Mch.	18—Treasurer's Bond	$ 18.75	
	24—Stationery	20.50	
Apr.	14—1M Envelopes	22.60	
	26—Printing	35.10	
	27—1M Postal Cards	10.00	
	27—Printing	3.00	
May	5—Telephone and Telegraph	9.50	
	6—Postage	10.00	
	Total		$ 129.45
May	6—Balance in Bank		$3162.02

(Signed) T. M. DYE, Secretary.

EXHIBIT B.

TREASURER'S REPORT

TO

MISSISSIPPI MEDICAL ASSOCIATION

MAY 10, 1927

Balance Association funds as shown by last report		$3557.04
July 1st, 1926, Received from Dr. T. M. Dye, Secretary		1562.50
		$5119.54

DISBURSEMENTS.

May 24th, 1926, to Dr. J. F. Underwood	$470.73	
May 25th, 1926, to New Orleans Med. & Sur. Journal	234.58	
Aug. 19th, 1926, to Andree Printing, Inc.	155.50	
Sept. 4th, 1926, to New Orleans Med. & Sur. Journal	19.20	
Sept. 28th, 1926, to New Orleans Med. & Sur. Journal	238.44	
Jan. 6th, 1927, to New Orleans Med. & Sur. Journal	252.66	
Apr. 12th, 1927, to New Orleans Med. & Sur. Journal	250.25	1621.36
Balance		$3498.18

RECEIPTS MEDICO-LEGAL FUND.

Balance last report		$6804.64
July 1st, 1926, received from Dr. T. M. Dye, Secretary	$237.50	
May 6th, 1927, Interest on T. C. No. 20522 to May 1st	165.21	
May 6th, 1927, Interest on T. C. No. 20873 from August 4th, 1926, to May 1st, 1927	29.55	
May 6th, 1927, Interest on Liberty Bonds	170.00	602.26
		$7406.90

DISBURSEMENTS.

May 22nd, 1926, to Dr. S. H. Hairston	$250.00	
Nov. 3rd, 1926, to Dr. J. H. Rush	250.00	500.00
		6906.90
Association Balance		$ 3498.18
Medico-Legal Balance		6906.90
		$10,405.08

The above funds are represented as follows:

Cash in hand	$1079.94	
Time Certificate No. 21879	5325.14	
Second Liberty Loan Bond No. E 00167150	1000.00	
Third Liberty Loan Bonds Nos. 1539096-1539097 for $1000 ea.	2000.00	
Fourth Liberty Loan Bond No. K 00705340	1000.00	
		$10,405.08

Respectfully submitted,

J. M. BUCHANAN, Treasurer.

THE FLOOD AND THE MEDICAL PROFESSION.

Now that the flood is receding and there is time to think about what has been done during the past few weeks, we may safely say that the medical profession has on this occasion, as it has always done previously, met the situation. Whenever there is an emergency, it is always to the medical profession that the people go for help. In time of war or famine, pestilence or flood it is the old regulars who are appealed to for help. No matter how popular the various cults may be in time of peace, when there is any real trouble the regular medical profession is looked to and called upon.

It is always the local physician who faces the real emergency. Often without adequate help and without sufficient supplies, it is he who must assuage the suffering and give first aid to the injured. It goes without saying when the daily press states that the Red Cross is on the way and a train load of physicians and nurses is being sent that the local doctor has already been on the job and has things well in hand by the time help—and much needed help it is true—reaches the "front".

Recently Nicholas Murray Butler spoke of the "doctor who cared mightily for every patient, who stopped at nothing, whose tenderness matched his skill, and whose devotion went parallel with his service." Once more our hats are off to the home doctor.

At its regular monthly meeting, June 10, the Staff of the Vicksburg Sanitarium presented the following program:

1. Intestinal Obstruction, Dr. G. M. Street.

2. General Miliary Tuberculosis, Dr. J. A. K. Birchett, Jr.

3. Edema of the Larynx, Dr. J. A. K. Birchett, Jr.

4. Gastro-Intestinal Hemorrhage, Dr. W. H. Parsons.

The June meeting of the Issaquena-Sharkey-Warren Medical Society was held on the 14th at Vicksburg with the following program:

1. Acidosis and Alkalosis, Dr. J. A. K. Birchett.

2. Tonsillectomy, Dr. D. A. Pettit.

3. Medical Ethics, Dr. E. F. Howard.

SOUTHERN PEDIATRIC SEMINAR.

Announcement is made that the Southern Pediatric Seminar will be held at Saluda, North Carolina, from July 25th to August 6th, 1927. The program indicates that this year's work will be a well rounded, post-graduate course in pediatrics. Dr. D. Lesesne Smith, M. D., is registrar and may be addressed at Infants' and Children's Sanitarium, Saluda, N. C.

EX-PRESIDENTS.

At the 1927 meeting of the Mississippi State Medical Association eighteen of the twenty-four living ex-presidents were registered. Fifteen of this number were present at a luncheon given by Drs. Willis Walley and D. W. Jones on May 11th. On this occasion there was organized the ex-Presidents' Club, which elected P. W. Rowland, chairman, and D. W. Jones, secretary. The following members were present: P. W. Rowland, Oxford; J. M. Buchanan, Meridian; W. W. Crawford, Hattiesburg; D. W. Jones, Jackson; D. J. Williams, Gulfport; S. W. Glass, Clarksdale; I. W. Cooper, Meridian; T. M. Dye, Clarksdale; Willis Walley, Jackson; F. J. Underwood, Jackson; Henry Boswell, Sanatorium; S. W. Johnson, Vicksburg; W. A. Dearman, Gulfport; G. S. Bryan, Amory; T. E. Ross, Hattiesburg.

The object of this club is to promote good fellowship among the members and to encourage attendance at the meetings of the Association. They will sit together at a luncheon once only at the annual meeting; the host of the luncheon will not be announced until the luncheon is served. There are "no dues, and no politics." The oldest member present becomes chairman automatically. The active president of the Association will be the honor guest and will be initiated in due form.

The South Mississippi Medical Society held its regular monthly meeting at Hattiesburg on June 7. The program was as follows:

1. Physiotherapy, Dr. W. W. Hickman, Hattiesburg.

2. Infections of the Maxillary Sinus, Dr. S. J. Gaddy, Hattiesburg.

3. A Paper, Dr. Forbus of Johns Hopkins, Baltimore.

4. Acute Osteomyelitis, Dr. M. L. Flynt, D'Lo.

5. Eczema, Dr. R. W. Hall, Jackson.

6. Abruptio Placentae, Dr. J. S. Gatlin, Laurel.

7. Cranial Injuries, Dr. R. H. Cranford, Laurel.

A dinner was served by the Alumnae of the South Mississippi Infirmary, the proceeds of which were to go to a nurse suffering from pulmonary tuberculosis.

MORE HEALTH UNITS.

Full-time County Health Departments for a period of sixty days have been organized in Humphreys, Sunflower, and Issaquena counties. It is thought that with adequate medical and nursing personnel, together with Sanitary Engineers and Inspectors, the people of these counties could be immunized against typhoid, general sanitation improved in the community, and from a health standpoint the people would be better off than they were before the flood came. It is also felt that with this two months' intensive public health program that such demonstrations could be made that the citizenship of those counties will busy themselves to the end that permanent full-time health departments will be established.

For the period April 20 to June 1, the Hygienic Laboratory of the State Board of Health has distributed 252,000 c.c. of typhoid vaccine.

The North Carolina State Board of Health has furnished to the Mississippi State Board of Health five well trained sanitary inspectors. Indiana has furnished three, and Alabama one Sanitary Inspector and one Sanitary Engineer.

Seventy nurses have been used in flood relief work in the nine inundated counties in Mississippi.

Too much cannot be said for the medical profession of Mississippi for the splendid spirit manifested in rendering unselfish and untiring services to the flood sufferers. The State Board of Health had offers of services from medical men in the state sufficient to take care of a disaster of five times the enormity of the present one. This is the usual practice of the medical profession of Mississippi. In the World War and at all other times they have been ready and willing cheerfully to do whatever needs to be done. The physicians of the Delta flooded area are undaunted by the harrowing scenes they have experienced and are cheerful and optimistic with regard to the future, notwithstanding the fact that most of them have lost most of their possessions and in some instances have been wiped out completely from a financial standpoint. All of them have worked almost day and night in the work of protecting and relieving their fellow sufferers with no thought of remuneration. Can you beat that?

Under the chairmanship of Dr. F. J. Underwood the following public health program was presented at the Social Workers' Conference at the University of Mississippi, June 23:

1. Health Problems and Health Work in the South, Waller S. Leathers, M. D., Professor Chair of Preventive Medicine, Vanderbilt University.

2. Importance of Communicable Disease Control in Mississippi—Present Day Methods—Hardie R. Hays, M. D., Director Bureau of Communicable Diseases, Missisippi State Board of Health.

3. Importance of a State-wide Milk Sanitation Program for Mississippi—With a Plea for Uniformity in Procedure, Mr. Leslie C. Frank, Sanitary Engineer, U. S. Public Health Service.

Ten minute discussion of Mr. Frank's paper by Mr. H. A. Kroeze, Director of Bureau of Sanitary Engineering, Mississippi State Board of Health.

4. Our Maternal and Infant Welfare Program, Mary D. Osborne, R. N., Supervisor.

5. Present Status of Full-time County Health Work—Plans for Future Development—Calvin C. Applewhite, M. D., Director, Bureau of County Health Work, Mississippi State Board of Health.

Dr. E. M. Gavin of Richton, Mississippi, was re-elected Councillor for the Seventh District at the recent meeting of the State Association in Jackson.

Dr. B. T. Robinson of New Agusta, who is head of the County Health Unit for Perry County, reports success in his campaign of vaccinations and examination of school children.

Dr. Henry Boswell of the Mississippi State Tuberculosis Sanatorium has returned recently from several days spent in Indianapolis attending sessions of the American Sanatorium Association and the National Tuberculosis Association. While in Indianapolis, Dr. Boswell was given the very signal honor of being elected president of the American Sanatorium Association. This is the first time that this honor has ever been conferred upon a Southerner. Dr. Boswell was also re-elected to a place on the Executive Board of the National Tuberculosis Association. He is likewise the only Southerner to be accorded a place upon this board.

Dr. Boswell leaves about the middle of June for New York in answer to a request from Dr. Taylor that he serve as Chairman of the Committee on Early diagnosis of Tuberculosis during the campaign. Dr. Boswell goes to confer with other authorities relative to the direction of this important campaign work.

The Jackson Infirmary Training School announces the following list of graduates: Miss Mary A. White, Miss Virginia Inman, Miss Maudette Cooper, Miss Jeanette Mathews, Miss Bessie I. Turner, Miss Minnie Gardner, Mrs. Esther Powell Curtis.

The Mississippi State Board of Health calls attention to a letter that is being sent from New York by a concern that styles itself "International Health Institute":

Secretary,
Chamber of Commerce.

Dear Mr. Secretary:

"We are in need of resident physicians in your locality—physicians capable of upholding the strictly ethical requirements of our Institution.

"May we prevail upon you to assist us in this matter by supplying us with the names of those who might qualify.

"Briefly, our plan is this:

"Those qualifying are allowed a fee of three dollars for each examination of subscribers to our Health Extension Service. Visits to resident physicians are arranged by us at periodic times during the term of the subscription.

"The affiliation will not interfere with their regular practice and it is understood, of course, that we will co-operate with and conform to every splendid standard of the American Medical Association.

"Our work is purely constructive and educational. Our service does not include medical and surgical treatment. A reflection of the great good accomplished is shown by the 400,000 membership of a similar organization.

"Thanking you in anticipation of a reply at your earliest convenience, we remain

Very truly yours,

INTERNATIONAL HEALTH INSTITUTE,
George W. Smith,
Assistant Secretary."

The Bureau of Investigation of the American Medical Association makes the following report:

"The 'International Health Institute, Inc.,' is at present, it seems, nothing more than a paper organization. It has for its president one Charles Berminster Munro, who used to be with the Long Beach National Bank at Long Beach, Long Island. Its vice-president is J. C. Lipsey, who is said to have been employed in an executive capacity by A. W. Hyde and Company, Inc., 2061 Broadway, New York City. The secretary is Gerard Warren Proctor, who is assistant sales manager of the A. W. Hyde and Company, Inc. The assistant secretary is George W. Smith, whose antecedents we know nothing about.

"Although we requested the International Health Institute, Inc., to give us the names of the incorporators, this request was not complied with. We have learned, however, that the incorporators were Josephine Applebaum, Thomas LePetri, and Amelia Decker. These three individuals, apparently, were mere figureheads whose names were used by the attorney for the International Health Institute, in order to comply with the state law requiring three adult residents of the State of New York to sign the papers of incorporation.

"The concern states that it intends to render a service similar to that of the Life Extension Institute, with four quarterly physical examinations and four urinalyses, 'supplemented with a complete course in body-building and rules of right living.' They state that they will pay a fee to regular registered physicians to make physical examinations, and we believe that the fee they offer is $3.00, which, of course, is hopelessly inadequate for any physical examination that is worth while.

"As you know, THE JOURNAL has taken the attitude for some time that there is no good reason for the existence of these various concerns that sell a urinalysis service, together, in some instances, with a physical examination. The proper person to do such work is the family physician, to whom the patient will be a human being and not a number. The physician who is familiar with the individual and his idiosyncrasies is in a position to give really valuable service in periodic examinations. The service that one gets from commercial concerns that are in this line is, even when honestly given, of indifferent value."

Central Medical Society met in Jackson, May 24, 1927. The Yazoo County physicians furnished the following program:

1. Acute Dilatation of the Stomach Following Operations, Dr. O. H. Swayze.
2. Hemothorax Following Gun-Shot Wound, Dr. T. J. Rainer.
3. Report of Some Interesting Cases, Dr. W. D. McCalip.
4. Why Doctors Don't Locate in the Country, Dr. C. M. Coker.
5. Syphilis, Dr. W. E. Noblin.
6. A Paper, Dr. W. H. Frizell.

BOOK REVIEWS

Diseases of Women: By Harry Sturgeon Crossen, M. D., F. A. C. S. 6th ed. revised and enlarged. Illus. St. Louis, C. V. Mosby Co. 1926. 1005 p.

It is hardly necessary to say anything regarding the appearance of the new edition (6th) of this work of so eminent a gynecologist. Crossen's Diseases of Women has been well known to students and practitioners. Beginning with the first chapter, on Taking a Gynecological History and How to Make Gynecological Examinations, what to note and how to interpret symptoms and physical findings, the volume is replete with all the newest advances in diagnosis and treatment. Systematically divided into chapters, from the external genitals to all deeper organs, from anatomical and physiological conditions to pathological conditions, with many illustrations concerning normal and abnormal histology and anatomy, illustrations of nonsurgical and surgical methods of treatment, the work is the product of a real master.

ADOLPH JACOBS, M. D.

Neuritis and Neuralgia: By Wilfred Harris, M. D., F. R. C. P. New York, Oxford University Press. 1926. 418 p.

The author has given to the medical profession, with a special interest to the neurologist, a book which is clear, concise, easily read and understandable. A salient factor of this publication is that it is shorn of all unnecessary and superfluous verbiage. The ear, nose and throat specialist will find thoroughly covered Sluder's sphenopalatine neuralgia. For the general practitioner the functional vasomotor disorders including a clear and concise conception of acroparesthesiae. To the neurologist he presents a wealth of neurological data concerning neuritis and neuralgia as is not found in other publications. Even though the author has given his own views on trigeminal neuralgia they are, as he states, the results of his own personal observation and study. The book contains many excellent illustrations. It is intelligently written in sequential neurological order and no doubt will find its place on the book shelf of every physician who keeps abreast of the times. This work of Harris on such an interesting neurological subject fills a niche of its own.

W. J. OTIS, M. D.

Textbook of Bacteriology: By Hans Zinsser, M. D. New York, D. Appleton & Co. 1927. 1053 p.

Zinsser's present edition of this standard medical text has been fully revised and brought thoroughly up to date, Indeed one may say with assurance that this is the last word in textbooks on bacteriology.

In addition to the bacteriological data per se, the author has spared no effort in furnishing the general medical reader with that information so often difficult to find, in the practical applications of the knowledge derived from the vast majority of the recent advances in this field. It would pay any surgeon or medical practitioner to invest in this work and peruse its pages at great length.

F. M. JOHNS, M. D.

Principles of Surgery for Nurses: By Montague Sydney Woolf, M. D. Philadelphia, W. B. Saunders Co. 1925. 350 p.

The author has taken up the principles of surgery for the instruction of nurses in a most instructive way.

There is a short resumé of the history of surgery which is followed by a discourse on bacteriology, inflammations, and following this, the fundamental principles of the surgical diseases of the different systems are discussed, with a most excellent and full summary after each chapter.

The book is recommended highly for the purpose for which it was written.

I. M. GAGE, M. D.

Pseudo Appendicitis: By Thierry de Martel, M. D., and W. H. J. Antoine, M. D. Philadelphia, F. A. Davis Co. 1925. 211 p.

The authors have shown that all cases diagnosed as chronic appendicitis operated on with the removal of the appendix have not resulted in the relief of the clinical symptoms.

The book deals with pathological states of the right half of the colon, especially cecum and ascending colon. The pathological states being (1) abnormally mobile cecum, (2) ptosis of cecum which is fixed and adherent; perivisceritis of inferior quadrant, (3) ptosis of hepatic flexure only, (4) ptosis of whole right colon, (5) Jackson's pericolic membrane, (6) pericolitis of hepatic flexure and perivisceritis of superior quadrant, (7) union in double-barrel shotgun fashion of ascending and transverse colon.

All of the above may simulate chronic diseased states of the appendix which are not relieved by appendectomy.

The pathology, symptomatology, and roentgen-ray findings with medical and surgical treatment

are fully and thoroughly discussed. There is a complete bibliography appended.

This book should be found in the library of those engaged in surgical practice and should be thoroughly studied by the younger surgeons.

I. M. GAGE, M. D.

The Duodenal Tube and Its Possibilities: By Max Einhorn, M. D. 2d ed. rev. and enl. Illus. Philadelphia, F. A. Davis Company. 1926. 206 p.

This little book of 197 pages, written by the father of gastro-enterology in this country, is the single text which alone deals with the duodenal tube and its congeners. Dr. Einhorn has outlined in six brief but concise chapters the clinical importance of applying his original idea (duodenal intubation) to the diagnosis and treatment of disease.

The duodenal contents, representing the tangible products of the stomach and pylorus, duodenum, pancreas, liver, gall-bladder and biliary ducts, are described and methods for analysis are discussed. For example, one notes the important information derived from tests of the duodenal contents and biliary tract disease, especially cases of jaundice with or without obstruction and from tests for the pancreatic ferments. However, the chemical methods applicated by the author on determining the quantity of these ferments, have been found inaccurate and valueless for proper study of the external pancreatic function. The author's criticism of the Lyon technique is without due justification,—numerous authorities having been convinced that the biliary drainage following magnesium sulphate instillation into the duodenum, affords a very valuable diagnostic and therapeutic agent in inflammations of the biliary system.

Many case histories are cited for the purpose of illustrating the clinical value of abnormalities found in the physical, chemical and microscopic characteristics of duodenal content.

The chapter on the use of a duodenal tube in therapeutics considers in detail methods for duodenal alimentation and medication in addition to the employment of this instrument in surgical procedure. No credit is given to non-surgical biliary drainage as a therapeutic method.

The last chapter is a discussion of certain instruments allied to the duodenal tube but seldom used,—pyloric dilator, infantile pyloric catheter, delineator and aspirator.

This second edition of Dr. Einhorn's book will continue to serve a most useful purpose as a reference work, especially for the physician making use of the duodenal tube in his practice.

DANIEL N. SILVERMAN.

Studies in Intracranial Physiology and Surgery: Third Circulation; The Hypophysis; The Gliomas: By Harvey Cushing, M. D. (The Cameron Prize Lectures, 1925.) London, Oxford Univ. Press. 1926. 146 p.

There can be no monument so impressive as one that lives, breathes, thinks and works. A scientist may achieve immortality as purely through a school of able, well-trained disciples as through epoch-making achievements of his own. If a man do both, he attains a greatness no man may challenge. Halstead and Kocher live in Cushing, and as surely Cushing shall live in Weed, Dandy, Noffziger and the rest who have worked by his side.

Cushing has touched and illumined many subjects in his time, but his true love is the cerebro-spinal apparatus. His is a peculiarly inquisitive, lucid and pertinacious mind, and though his literary method suffers from the very profundity of his knowledge, the industrious reader is always amply rewarded.

The three lectures included in this volume were delivered as the Cameron Prize Lectures, at Edinburgh in Octobeer, 1925. They are a chronicle of research work carried out at Johns Hopkins and at Harvard, by Cushing and his associates. Problem leads to problem. From a blind alley of investigation a bypath leads to an achievement. Each achievement forms a new vantage-point from which new problems come to view. Successive workers carry the burden in a community of toil and speculation. Their ideas add to the slowly growing total until we see a new field full and clear. True, there are still unexplored places, but these are charted and we feel no doubt of the outcome. It is merely a matter of time and method.

Lecture I deals with the cerebro-spinal fluid, its source, circulation, function and absorption. To most readers this will be the most instructive and satisfying chapter. The information is almost all a matter of record, but few of us have read the widely scattered reports. Depending on the standard treatises, we have been puzzled and disappointed with the hazy and evasive accounts apparently derived from a common mysterious source of misinformation. There may be imperfections in this account, but if so the reader has the record before him, the process of reasoning explained, and he is free to disagree and prove

Lecture II—the pituitary gland as now known. Much light is shed on a subject that is still obscure. Demonstrable facts are established. Untenable hypotheses are exploded. Conclusions are carried as far as facts permit. Suggestive information leads on to speculation. Much work has been done and good progress made. The job is outlined and ready for the workers.

Lecture III—intracranial tumors and the surgeon, is a history of progress from Victor Horsley to date. It is calculated to make all general surgeons, most neurologists, and many pathologists very humble. The diagnosis, localization, and surgical treatment of intracranial tumors has progressed so far that the general surgeon cannot hope to catch up, the pathologist must take lessons from the neuro-surgeon-pathologist and the neurologist must follow his work or fall behind. The pathology and symptomatology of brain tumors have been as much illumined by the biopsy as have been those of abdominal lesions. The pathology of the living has supplemented that of the dead.

In conclusion I would warn all prospective readers that this is not a book for vacation hammocks. The unmistakable odor of toil hangs about it. Ample award awaits those who are willing to labor and think it through, but like an honest workman it despises a loafer and gives him nothing but a hard look and harder words.

J. D. RIVES, M. D.

PUBLICATIONS RECEIVED.

Oxford University Press, New York and London: "A Handbook of Diseases of the Stomach," by Stanley Wyard, M. D., B. S., M. R. C. "Intracranial Tumours and some errors in their Diagnosis." by Sir James Purves-Stewart, K. C. M. G., C. B., M. D., F. R. C. P. "Manual of Bacteriology," by Robert Muir, M. A., M. D., Sc.D., LL.D., F. R. S., and late James Ritchie, M. A., M. D., F. R. C. P. "The Health of the Child of School Age," by various authors, with a foreword by Sir Thomas Oliver. "An Illustrated Guide to the Slit-Lamp," by T. Harrison Butler, M. A., D. M., M. R. C. S., L. R. C. P. "Malarial Psychoses and Neuroses," by William K. Anderson, M. D., F. R. F. P. S.

Paul B. Hoeber, Inc., New York: "Fundamentals of the Art of Surgery," by John H. Watson, M. B., B. S., F. R. C. S. "Approaching Motherhood," by George L. Brodhead, M. D.

Lea & Febiger, Philadelphia: "Practical Otology," by Morris Levine, M. D.

William Wood and Company, New York: "The Life and Work of Sir Patrick Manson," by Philip H. Manson-Bahr, D. S. O., M. D., F. R. C. P., and A. Alcock, C. I. E., LL.D., F. R. S. "Tropical Surgery and Surgical Pathology," by Karuna K. Chatterji, F. R. C. S. I.

Williams & Wilkins Company, Baltimore: "The Normal Chest of the Adult and the Child," by J. A. Myers.

P. Blakiston's Son & Company, Philadelphia: "Surgical Anatomy of the Human Body," v. 3, by John B. Deaver, M. D., Sc.D., LL.D., F. A. C. S.

The MacMillan Company, New York: "City Health Administration," by Carl E. McCombs, M. D. "How to Make the Periodic Health Examination," by Eugene Lyman Fisk, M. D., and J. Ramser Crawford, M. D.

F. A. Davis Company, Philadelphia: "Diseases of the Skin and Syphilis," by Albert Strickler, M. D.

Government Printing Office, Washington: Dept. of Commerce, Mortality Statistics, 1924. The Medical Dept. of the U. S. Army in the World War, Volume XI, Surgery, Part I.

Miscellaneous: "Dengue," by J. F. Siler, Milton W. Hall and A. Parker Hitchens. "An Outline of History of Ophthalmology," by Thomas Hall Shastid, A. M., M. D., F. A. C. S.

REPRINTS.

"Taking Medical Education to the Practitioner," by Charles A. Gordon, M. D. "Report of the Committee on Public Health and Medical Education, New York." "Pruritus Ani and Pruritus Vulvae of Fungal Origin," by Aldo Castellani, M. D. "Symbiotic Fermentation Phenomenon, Its Use in Differentiation of Micro-organisms and Identification of Carbon Compounds," by Aldo Castellani, M. D. "Action of Bacilli of Paratyphoid, Dysentery and Metadysentery Groups on Various Starches," by Aldo Castellani, M. D.